Argued 18 & 19 Nov 1-171 Judge Davis

Dickinson for appt
Clifford " appellee

Not novel

Reversed

TRANSCRIPT OF RECORD.

SUPREME COURT OF THE UNITED STATES.

No. ~~263~~. 52

RUFUS K. SEWALL, ADMINISTRATOR OF HENRY CLARK, DECEASED, APPELLANT,

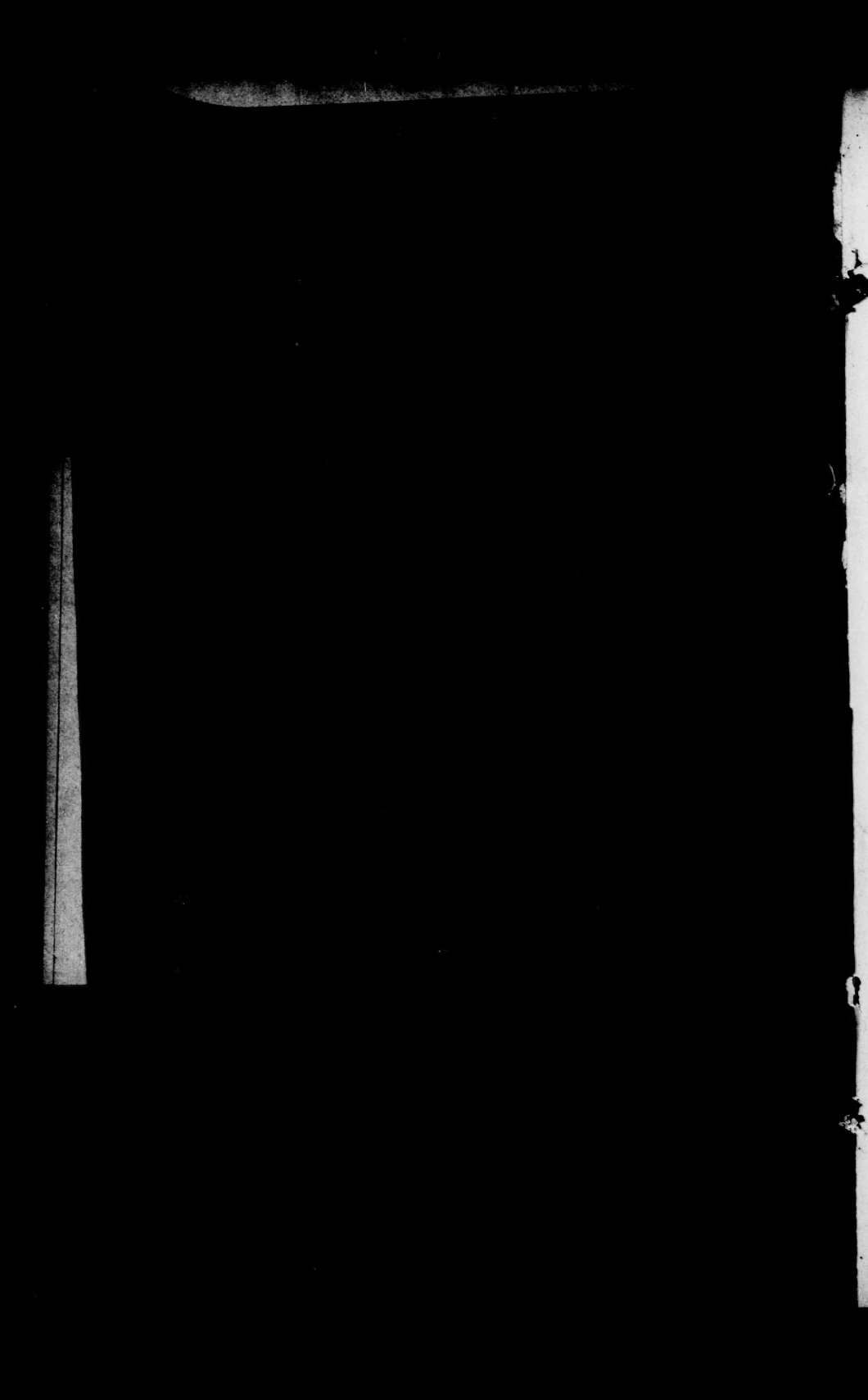
VS.

JOHN WINSLOW JONES ET AL.

APPEAL FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE DISTRICT OF MAINE.

FILED OCTOCER 16, 1873.

Judge Hunt
Dwnte
Reversed



SUPREME COURT OF THE UNITED STATES.

No. 263.

RUFUS K. SEWALL, ADMINISTRATOR OF HENRY CLARK, DECEASED, APPELLANT,

vs.

JOHN WINSLOW JONES ET AL.

APPEAL FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE DISTRICT OF MAINE.

INDEX.

	Original.	Print.
Bill of complaint	3	1
The Isaac Winslow patent of April 8, 1862	6	2
specification	7	3
patent of May 13, 1862	9	4
specification	10	5
patent of May 20, 1862	12	6
specification	13	7
patent of August 26, 1862	16	8
specification	17	9
Prayer for relief	22-3	12
Subpœna in chancery	24	12
Appearance for respondent	25	13
Answer of respondent	25	13
References to authors by respondent	27	14
Respondent's references to users	28	15
Respondent's account of manufacture	29	15
Motion to amend bill	30	16
Agreement to amend	30	16
Amendment to bill	31	16
Amendment to answer	31	
Respondent's references to other patents	32	17
Respondent's references to other users	33-4	18
Answer as amended	35	19
General replication	44	22
Rufus K. Sewall appointed guardian of respondent	45	23
Rufus K. Sewall appointed administrator of respondent	45	32

	Original.	Print.
Publication of testimony	45	23
Decree for injunction and account	46	23
Master's report	51	24
Final decree	53	25
Claim of appeal	54	25
Appeal-bond	55	25
Authentication of record	59	26
Deposition of John W. Jones for complainant, viz:		
Direct examination	60	26
Cross-examination	62	28
Direct resumed	76	35
Cross-examination resumed	79	37
Direct re-resumed	81	38
Affidavit of complainant of February 18, 1870	81	38
Deposition of Samuel Rumery for complainant, viz:		
Direct examination	87	41
Cross-examination	90	42
Prior deposition of Samuel Rumery	91	43
Affidavit of Samuel Rumery	97	46
Affidavit additional	102	49
Deposition of William H. Sawyer for complainant, viz:		
Direct examination	104	50
Cross-examination	105	50
Direct examination resumed	106	51
Deposition of Andrew Mulnix for complainant, viz:		
Direct examination	106	51
Cross-examination	108	52
Direct examination resumed	110	53
Deposition of Samuel A. Breed for complainant, viz:		
Direct examination	110	53
Cross-examination	111	53
Deposition of B. S. Hedrick for complainant, viz:		
Direct examination	112	54
Cross-examination	113	54
Deposition of James P. Baxter for complainant, viz:		
Direct examination	115	55
Cross-examination	116	56
Direct examination resumed	118	57
Deposition of S. Dana Hayes for complainant, viz:		
Direct interrogatories	119	58
Cross-interrogatories	121	59
Redirect interrogatories	122	59
Recross interrogatories	123	60
Answers to direct interrogatories	123	60
cross-interrogatories	128	63
redirect interrogatories	130	64
last cross-interrogatories	131	64
Durand specification	131	64
Gunter's specification	134	65
Wertheimer's specification	138	67
assignee's disclaimer	143	70
second specification	150	74
EVIDENCE OF RESPONDENT.		
Isaac Winslow, application of April 8, 1862	157	77
specification	158	78

	Original.	Print.
Isaac Winslow, application of March, 1853	160	79
application returned for deficiencies	161	80
Official letter to Isaac Winslow of September 28, 1853	161	80
Isaac Winslow's letter to Commissioner of October 26, 1853	162	80
letter to Commissioner of November 4, 1853	162	80
specification returned for amendment	162	80
letter to Commissioner of November 4, 1853	163	81
patent denied November 19, 1853	164	81
Dates and memoranda in Patent-Office	164	81
Durand specification of August 25, 1810	166	82
Gunter's specification of January 6, 1841	169	84
Deposition of Louis Bertram for respondent, viz:		
Direct interrogatories	173	86
Cross-interrogatories	173	86
Answers to direct interrogatories	174	87
Answers to cross-interrogatories	176	87
Agreement as to use of affidavits	177	88
Affidavit Isaac Reckhow	178	88
William H. Hudson	178	88
James P. Baxter	179	89
Second affidavit of Isaac Reckhow	181	90
Affidavit of Louis Bernard	183	91
Affidavit of Stephen H. Provost	184	91
Second affidavit of Stephen H. Provost	185	92
Deposition of Charles Mitchell for respondent, viz:		
Direct examination	185	92
Cross-examination	189	94
Redirect examination	195	97
Re-cross-examination	196	98
Letter and account of stock of Charles Mitchell	197	98
Deposition of Upham S. Treat for respondent, viz:		
Direct examination	198	99
Cross-examination	202	101
Direct examination resumed	206	103
Deposition of Henry Evans, jr., for respondent, viz:		
Direct examination	208	104
Cross-examination	210	105
Direct examination resumed	214	107
Cross-examination resumed	215	108
Deposition of Charles J. Underwood for respondent, viz:		
Direct examination	216	108
Cross-examination	221	111
Direct examination resumed	231	116
Invoice of corn bought of N. Winslow & Co., A	232	117
B	232	117
C	233	117
D	233	118
Deposition of Aaron Ring for respondent, viz:		
Direct examination	234	118
Cross-examination	240	121
Deposition of George W. Day for respondent, viz:		
Direct interrogatories	244	123
Cross-interrogatories	245	124
Answer to direct interrogatories	245	124
Answer to cross-interrogatories	246	125

	Original.	Print.
Deposition of Samuel S. Pierce for respondent, viz:		
Direct interrogatories	248	125
Cross-interrogatories	248	125
Answer to direct interrogatories	249	126
Answer to cross-interrogatories	250	126
Additional deposition of Samuel S. Pierce for respondent, viz:		
Direct examination	251	127
Cross-examination	252	127
Direct examination resumed	252	127
Invoice of corn bought of Nathan Winslow	253	128
Deposition of George F. Lewis for respondent, viz:		
Direct examination	253	128
Cross-examination	256	129
Direct examination resumed	263	133
Cross-examination resumed	266	134
Direct examination again resumed	266	135
Deposition of George Burnham, jr., for respondent, viz:		
Direct examination	267	135
Cross-examination	272	138
Additional deposition of George Burnham, jr., for respondent, viz:		
Direct examination	277	141
Cross-examination	278	141
Direct examination resumed	280	142
Deposition of William H. Swett for respondent	280	142
Deposition of Stephen P. Sharples for respondent, viz:		
Direct examination	280	142
Analysis of corn	282	143
Cross-examination	285	145
Direct examination resumed	288	146
Agreement of counsel	288	146
Defendant's Exhibit A, can used by plaintiff	288	147
B, can used by defendant	289	147
C, extract from Turner's Chemistry	289	147
D, extract from Liebig	290	147
E, extract from Housekeeper's Friend	291	148

COMPLAINANT'S REBUTTING EVIDENCE.

Deposition of Matthew F. Whittier for complainant, viz:		
Direct interrogatories	293	149
Cross-interrogatories	293	149
Answers to direct interrogatories	294	150
Answer to cross-interrogatories	296	150
Deposition of Jeremiah R. Ford for complainant, viz:		
Direct examination	297	151
Cross-examination	300	153
Deposition of J. W. Jones for complainant, viz:		
Direct examination	302	154
Cross-examination	305	155
Direct examination resumed	305	155
Deposition of Samuel Rumery for complainant	305	156
Deposition of James P. Baxter for complainant, viz:		
Direct examination	308	157

	Original.	Print.
Deposition of James P. Baxter—*Continued.*		
Cross-examination	313	159
Direct examination resumed		
Cross-examination resumed	316	161
Direct examination again resumed	316	161
Authentication of proofs	317	161
Opinion	218	162

1 MAINE DISTRICT, *first circuit:*

Circuit court, U. S. April term, A. D. 1872.

JOHN W. JONES ET ALS.
vs.
RUFUS K. SEWALL, ADMINISTRATOR OF HENRY Clark. } In equity.

W. H. Clifford, solicitor for complainant.
R. K. Sewall, Bradbury & Bradbury, A. A. Strout, solicitors for respondent.

Stephen Berry, printer, 37 Plum street, Portland.

2 DISTRICT OF MAINE, *first circuit:*

At a term of the circuit court of the United States for the first circuit, begun and holden at Portland, within and for the district of Maine, on the twenty-third day of April, in the year of our Lord one thousand eight hundred and seventy-three.

Present, the honorable Nathan Clifford, associate justice of the Supreme Court.

NOTE.—The district judge having formerly been counsel in the subject-matter of this cause, took no part in the same in this court.

3 JOHN W. JONES ET ALS.
vs.
RUFUS K. SEWALL, ADMINISTRATOR OF HENRY Clark et als. } In equity.

On the nineteenth day of November, A. D. 1867, W. H. Clifford, solicitor, filed the following:

Bill of Complaint.

UNITED STATES OF AMERICA,
District of Maine, circuit court:

To the judges of the circuit court of the United States for the district of Maine:

John Winslow Jones, of Portland, in said district of Maine, brings this his bill of complaint against H. Clark, of Wiscasset, in said district, and thereupon your orator complains and says, as he is informed and believes, that heretofore, and before the eighth day of April, A. D. 1862, one Isaac Winslow, of Philadelphia, in the State of Pennsylvania, deceased, who was a citizen of the United States until the time of his death, was the original and first inventor of certain new and useful improvements in preserving green corn; that the said new and useful improvements were not known or used by others before the invention thereof by the said Isaac Winslow, and were not at the time of the application of the said Winslow for patents therefor, as hereinafter mentioned, in public use, or on sale, with the consent and allowance of the said Isaac Winslow, as the inventor of the same, contrary to the pro-
4 visions of the statutes of the United States in such cases made and provided; that the said Winslow, being the inventor thereof, as aforesaid, and desiring to obtain an exclusive property in said inventions and improvements, paid into the Treasury of the United States

the sum of thirty-five dollars, and made application in writing to the Commissioner of Patents of the United States, expressing such desire, and delivered to the said Commissioner of Patents written descriptions of the said improvements, and of the manner and process of making, using, and compounding the same, in such full, clear, and exact terms as would enable any person skilled in the art to which they appertain, to make, use, and compound the same; that in said descriptions the said Isaac Winslow fully explained the manner in which he contemplated the application of the principle or character by which the said improvements might be distinguished from other inventions; that the said Isaac Winslow pointed out the improvements which he claimed as his own inventions, and, moreover, accompanied the whole with specimens of ingredients, and of the composition of matter, sufficient in quantity for the purposes of experiment; that said description was signed by said Isaac Winslow, and attested by two witnesses, and was filed in the Patent-Office of the United States; that in connection with said applications, the said Isaac Winslow made oath before some person authorized by law to administer oaths, that he did verily believe himself to be the original and first inventor of the said improvements, and that he did not know or believe the same was ever before known or used, and that he was a citizen of the United States.

And your orator further shows unto your honors that the said Isaac Winslow, on or about the eighth day of April, 1862, by his assignment in writing under his hand, duly executed and delivered, did assign, sell,
transfer, and set over unto John Winslow Jones, of Portland, in
5 the said district of Maine, all his right, title, and interest in and
to the said invention and letters-patent, to which assignment, or the record of which, or to a duly certified copy of the record of which your orator craves leave to refer; that the said Commissioner of Patents thereupon granted and issued to said Isaac Winslow letters-patent for the said improvements; that said letters-patent were issued from the Patent-Office in the name of the United States, under the seal of the Patent-Office, and were signed by the Secretary of the Interior and countersigned by the Commissioner of Patents, and were recorded in the Patent-Office; that said letters-patent contained short descriptions or titles of the said improvements, correctly indicating their nature and design, and in their terms granting to said Winslow, his heirs, administrators, and assigns, for terms of seventeen years, the full and exclusive liberty of making, using, and vending to others to be used, the said improvements, referring to the said specifications for particulars thereof, copies of which were annexed to the letters-patent, specifying what said Winslow claimed as his invention; that said letters-patent were delivered to said Winslow and bore date respectively, April 8, 1862, May 13, 1862, May 20, 1862, August 26, 1862; all of which was done according to the provisions of the acts of Congress in such case provided, as by said letters-patent will more fully appear, to which, or to the records of which, or to a duly certified copy of the records of which, your orator craves leave to refer, and which letters-patent, description, and specification were in the words and figures following:

No. 34928.

The United States of America, to all to whom these letters-patent shall come:

Whereas Isaac Winslow, of Philadelphia, Pennsylvania, has
6 alleged that he has invented a new and useful improved Indian

corn preserved green, (he having assigned his right, title, and interest in said invention to John W. Jones, of Portland, Maine,) which he states has not been known or used before his application; has made affirmation that he is a citizen of the United States; that he does verily believe that he is the original and first inventor or discoverer of the said invention, and that the same hath not, to the best of his knowledge and belief, been previously known or used; has paid into the Treasury of the United States the sum of thirty dollars, and presented a petition to the Commissioner of Patents, signifying a desire of obtaining an exclusive property in the said invention, and praying that a patent may be granted for that purpose:

These are therefore to grant according to law, to the said John W. Jones, his heirs, administrators, or assigns, for the term of seventeen years from the eighth day of April, one thousand eight hundred and sixty-two, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said invention, a description whereof is given in the words of the said Isaac Winslow in the schedule hereunto annexed, and is made part of these presents.

In testimony whereof I have caused these letters to be made patent, and the seal of the Patent-Office has been hereunto affixed.

Given under my hand, at the city of Washington, this eighth day of April, in the year of our Lord one thousand eight hundred and sixty-two, and of the Independence of the United States of America the eighty-sixth.

CALEB B. SMITH,
Secretary of the Interior.

Countersigned, and sealed with the seal of the Patent-Office.
[L. S.]
D. P. HOLLOWAY,
Commissioner of Patents.

7 The schedule referred to in these letters-patent, and making part of the same.

To all whom it may concern:

Be it known that I, Isaac Winslow, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful improvement in preserving Indian corn in the green state, and I hereby declare that the following is a full and exact description thereof.

In my first attempt to preserve Indian corn in the green state, without drying the same, I did not remove the kernels from the cob. The article thus obtained was very bulky, and when used the peculiar sweetness was lost, the same being absorbed, as I suppose, by the cob. After a great variety of experiments, I have overcome the difficulties of preserving Indian corn in the green state without drying the same, thus retaining the milk and other juices and the full flavor of fresh green corn, until the latter is desired for use. Instead of a hard, insipid, or otherwise unpalatable article, I have finally succeeded in producing an entirely satisfactory article of manufacture, in which my invention consists. I have employed several methods of treatment of the green corn with good results. My first success was obtained by the following process. The kernels, being removed from the cob, were immediately packed in cans and the latter hermetically sealed, so as to prevent the escape of the natural aroma of the corn, or the evaporation of the milk or other juices of the same; then I submitted the sealed cans and their contents to boiling or steam heat about four hours. In this way the milk and other juices of the corn are coagulated, as far as may be, boiling thus

preventing the putrefaction of these more easily destructible constituents. At the same time the milk and other juices are neither diluted
8 nor washed away, as would be more or less the case if the kernels were mixed with water and boiled. By this method of cooking green corn in the vapor of its juices, as it were, the ends of the sealed cans are bulged out, as though putrefaction and the escape of the resultant gases had commenced within the cans. Consequently, strong cans are required, and dealers are likely to be prejudiced against corn thus put up. I recommend the following method: Select a superior quality of sweet corn in the green state, and remove the kernels from the cob by means of a curved and gauged knife or other suitable means. Then pack these kernels in cans and hermetically seal the latter so as to prevent evaporation under heat or the escape of the aroma of the corn. Now expose these cans of corn to steam or boiling heat for about one hour and a half; then puncture the cans, and immediately seal the same while hot, and continue the heat for about two hours and a half longer. Afterward the cans may be slowly cooled in a room at the temperature of 70° to 100° Fah. Indian corn thus packed and treated may be warranted to keep in any climate. Being preserved in its natural state, as near as possible, it retains the peculiar sweetness and flavor of fresh corn right from the growing field. It is only necessary to heat this preserved corn and season the same, in order to prepare it for the table, as it is fully cooked in process of preserving. Other modes of treatment may be adopted without departing from my invention, so long as the hermetical sealing and use of the heat are so managed as to secure the aroma and fresh flavor and prevent putrefaction, thus producing the new article of manufacture substantially described.

Having thus fully described my invention, what I claim and desire to secure by letters-patent from the United States is the above-described new article of manufacture, namely, Indian corn when preserved in the green state, without drying the same, the kernels being removed
9 from the cob, hermetically sealed and heated, substantially in the manner and for the purpose set forth.

ISAAC WINSLOW.

Witnesses:
WM. HINKLE,
WILLIAMS OGLE.

No. 35274.

The United States of America, to all to whom these letters-patent shall come:

Whereas Isaac Winslow, of Philadelphia, Pennsylvania, has alleged that he has invented a new and useful improvement in preserving green corn, (he having assigned his right, title, and interest in said improvement to John W. Jones, of Portland, Me.,) which he states has not been known or used before his application; has made affirmation that he is a citizen of the United States; that he does verily believe that he is the original and first inventor or discoverer of the said improvement; and that the same hath not, to the best of his knowledge and belief, been previously known or used; has paid into the Treasury of the United States the sum of thirty-five dollars, and presented a petition to the Commissioner of Patents, signifying a desire of obtaining an exclusive property in the said improvement, and praying that a patent may be granted for that purpose:

These are therefore to grant, according to law, to the said John W. Jones, his heirs, administrators, or assigns, for the term of seventeen years from the thirteenth day of May, one thousand eight hundred and sixty-two, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said improvement, a description whereof is given in the words of the said Isaac Winslow in the schedule hereunto annexed, and is made a part of these presents.

In testimony whereof I have caused these letters to be made
10 patent, and the seal of the Patent-Office has been hereunto affixed.

Given under my hand, at the city of Washington, this thirteenth day of May, in the year of our Lord one thousand eight hundred and sixty-two, and the independence of the United States of America the eighty-sixth.

CALEB B. SMITH,
Secretary of the Interior.

Countersigned and sealed with the seal of the Patent-Office.
[L. S.] D. P. HOLLOWAY,
Commissioner of Patents.

The schedule referred to in these letters-patent, and making part of the same.

To all whom it may concern:

Be it known that I, Isaac Winslow, of Philadelphia, in the county of Philadelphia, and State of Pennsylvania, have invented a new and useful improvement in preserving green corn, and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

It has long been common to boil green or unripened Indian corn or maize, and then dry the same for winter use. But corn thus dried, when prepared for the table by again boiling, is more or less hard and insipid, having lost the fine flavor of fresh green corn.

If ears of corn be boiled and then hermetically sealed in cans, the cob seems to absorb the sweetness of the kernels; or, if the kernels are removed from the cob after boiling and then preserved, the finest flavor of the natural corn is lost. After many and varied attempts to preserve green corn without drying the same, finding that I did not obtain a
11 satisfactory result, I finally conceived the idea of first removing the corn from the cob and then boiling or cooking the kernels thus separated and preserving them. But this was met by a new difficulty. The kernels of corn being somewhat broken by removal from the cob, the milk and other juices were dissolved out in the process of boiling, and thus the corn was left insipid and unpalatable. I then attempted to cook the corn without contact with water, by exposing the cans containing the corn to boiling water.

This mode of preserving I found unsatisfactory. The milk of the corn was evaporated, and the corn more or less dried, whilst a long time was requisite to cook the corn sufficiently for preservation. Finally, I adopted the process of removing the corn from the cob, packing the kernels in cans, hermetically sealing the same, and then boiling the cans until the corn contained therein became completely cooked. The result of this process was extraordinary, the corn being of finer flavor than corn fresh from the field when boiled upon the cob in the usual

way. Since this discovery, I have adopted the practice of boiling or steaming the cans containing the corn-kernels thus sealed about four hours, though a shorter time may answer for most purposes.

The cans should be very strong, to prevent their bursting by heat. I have sometimes practiced puncturing the cans after they are well heated—say for ten minutes. This allows the air to escape, when I immediately reseal the cans, so as to prevent the evaporation of the juices of the corn or the loss of the natural aroma.

This puncturing has two advantages. It prevents the possible bursting of the cans, and allows the heads of the cans to press inward, when cool, so that dealers can see by this test that the corn is perfectly preserved. When the cans are not punctured, their ends will remain pressed outward after cooling, and yet the corn is perfectly pre-
12 served. The above-described process of removing the corn from the cob, and then preserving the kernels, affords several advantages over any method of preserving corn heretofore known. Among these advantages are the following: 1st. The peculiar sweetness and excellent flavor of the corn thus preserved; these qualities being consequent upon retaining all the milk and other juices, together with its fine natural aroma. 2d. The economy of space in boiling and packing, and convenience of handling, transportation, and sale. Having thus fully described my improved process, what I claim and desire to secure by letters-patent of the United States, is: The above-described process of first removing the corn from the cob, and then preserving the kernels substantially in the manner and for the purposes set forth.

ISAAC WINSLOW.

Witnesses:
SAMUEL C. OGLE,
WILLIAMS OGLE.

No. 35346.

United States of America, to all to whom these letters-patent shall come:

Whereas Isaac Winslow, of Philadelphia, Pennsylvania, has alleged that he has invented a new and useful improved process of preserving green corn, (he having assigned his right, title, and interest in said invention to John W. Jones, of Portland, Maine,) which he states has not been known or used before his application; has made affirmation that he is a citizen of the United States; that he does verily believe that he is the original and first inventor or discoverer of the said invention, and that the same hath not, to the best of his knowledge and belief, been previously known or used; has paid into the Treasury of the United States the sum of thirty-five dollars, and presented a petition to the Commissioner of Patents, signifying a desire of obtaining an
13 exclusive property in the said invention, and praying that a patent may be granted for that purpose. These are therefore to grant, according to law, to the said John W. Jones, his heirs, administrators, or assigns, for the term of seventeen years from the twentieth day of May, one thousand eight hundred and sixty-two, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said invention, a description whereof is given in the words of the said Isaac Winslow, in the schedule hereunto annexed, and is made part of these presents.

In testimony whereof I have caused these letters to be made patent, and the seal of the Patent-Office has been hereunto affixed.

Given under my hand, at the city of Washington, this twentieth day of May, in the year of our Lord one thousand eight hundred and sixty-two, and of the Independence of the United States of America the eighty-sixth.

CALEB B. SMITH,
Secretary of the Interior.

Countersigned and sealed with the seal of the Patent-Office.
[L. S.] D. P. HOLLOWAY,
Commissioner of Patents.

The schedule referred to in these letters-patent, and making part of the same.

To all whom it may concern:

Be it known that I, Isaac Winslow, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful improvement in the process of preserving green corn, and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

14 My improvement in preserving green corn consists in sealing it up in cans or other suitable vessels, and then boiling or steaming the same without allowing the corn to come in contact with the water or steam.

According to the common theory, corn, as well as fruits, cannot be preserved in sealed cans without excluding the air; therefore the first attempts at preserving unripened corn were made by boiling the same before sealing it up in cans. In this way the milk and other juices of the corn are more or less evaporated. If water be employed to boil the corn, the milk and juices are, to a greater or less extent, dissolved out. In either case the native aroma and sweet taste of the corn are destroyed, and the corn often becomes hard, like that which has been dried and afterward soaked and prepared for the table. In order to preserve the green corn as nearly as possible in its natural state, I have invented the improved process of sealing the unripe corn (after its removal from the cob) in air-tight cans, and then heating the same so as to coagulate the milk and other juices of the corn, and prevent the escape of the native aroma.

In preserving green corn by my improved process, the kernels should first be removed from the cob, (which may be readily accomplished by means of a curved knife invented for that purpose,) and then immediately put into strong tin cans and hermetically sealed. These cans are then boiled or steamed until the corn is thoroughly cooked, which usually requires about four hours, when the cans may be slowly cooled in a warm room. Less time may answer for corn intended for a cold climate or for present use. After many experiments I find that the small quantity of air which may be thus enclosed in the cans does not cause putrefaction or interfere in any way with the permanent preservation of the corn. Therefore the generally-received theory, that air must be entirely excluded from the cans, is completely overthrown by my experiments.

15 In this way of preparing corn, the air contained within the can at the time of sealing, and also the vapor from the corn, become

more or less expanded, so as to press the heads of the can outward, and thus give the appearance of cans containing spoiled corn, from which the gaseous products of decomposition have pressed the can-heads outward. As dealers have generally a great prejudice against such expanded cans, I have sometimes adopted the plan of puncturing the sealed cans during the process of boiling, or whilst the cans are still hot, in order to relieve the internal pressure by allowing the air to escape, and then sealing up the punctures so that in cooling the cans the pressure of the external atmosphere will spring the heads of the cans inward, like those of ordinary preserved fruit. In case the cans are punctured whilst hot, I prefer to make the punctures after the process of boiling has continued a short time, say about ten minutes, and then immediately seal up the puncture and continue the boiling. One advantage of puncturing the cans is, that it prevents the possibility of bursting them by heat. Corn preserved by my process is regarded by epicures as superior to that taken fresh from the field and boiled upon the cob in the usual way. In my method of preserving green corn the aroma is not allowed to escape, and nothing can be dissolved or washed out of the corn. It is obvious that the method of hermetically sealing green corn in cans, and previous to boiling, is applicable to ears of corn, though I do not recommend that practice. I am aware that vegetable substances have been preserved by boiling or cooking them in cans hermetically sealed either before or after exposure to heat; and that fruits have been thus cooked in their own juice, either with or without the addition of sugar. But in such cases the object of sealing has been the entire expulsion and exclusion of air from the cans. In my pro-
16 cess, the cans are sealed, irrespective of their containing a small quantity of air with the corn; and instead of continuing the heat only half an hour, (which has been supposed sufficient to boil green corn,) I continue the heat several hours, usually four hours, thus thoroughly coagulating the milky juice, and completely preventing putrefactive fermentation. I believe that all attempts to preserve green corn, without drying the same, have been unsuccessful previous to my invention. Having thus fully described my invention, what I claim and desire to secure by letters-patent of the United States is: The above-described process of preserving Indian corn, in the green state, without drying the same, the corn being sealed hermetically in cans or other vessels, and then exposed to heat, substantially in the manner and for the purposes set forth.

ISAAC WINSLOW.

Witnesses:
SAMUEL C. OGLE,
WILLIAMS OGLE.

No. 36326.

The United States of America to all to whom these letters-patent shall come:

Whereas Isaac Winslow, of Philadelphia, Pennsylvania, has alleged that he has invented a new and useful improvement in preserving vegetables in hermetically-sealed cans, (he having assigned his right, title, and interest in said improvement to John W. Jones, of Portland, Maine,) which he states has not been known or used before his application; has made affirmation that he is a citizen of the United States; that he does verily believe that he is the original and first inventor or discoverer of the said improvement, and that the same hath not, to the best of his

knowledge and belief, been previously known or used; has paid into the Treasury of the United States the sum of thirty-five dollars, and
17 presented a petition to the Commissioner of Patents, signifying a desire of obtaining an exclusive property in the said improvement, and praying that a patent may be granted for that purpose:

These are, therefore, to grant, according to law, to the said John W. Jones, his heirs, administrators, or assigns, for the term of seventeen years from the twenty-sixth day of August, one thousand eight hundred and sixty-two, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said improvement, a description whereof is given in the words of the said Isaac Winslow, in the schedule hereunto annexed, and is made part of these presents.

In testimony whereof, I have caused these letters to be made patent, and the seal of the Patent-Office has been hereunto affixed.

Given under my hand, at the city of Washington, this twenty-sixth day of August, in the year of our Lord one thousand eight hundred and sixty-two, and of the Independence of the United States of America the eighty-seventh.

CALEB B. SMITH,
Secretary of the Interior.

Countersigned and sealed with the seal of the Patent-Office.

[L. S.] D. P. HOLLOWAY,
Commissioner of Patents.

The schedule referred to in these letters-patent, and making part of the same:

To all whom it may concern:

Be it known that I, Isaac Winslow, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful improvement in the process of preserving green corn; and I do hereby
18 declare that the following is a full and exact description thereof.

My invention consists in a peculiar process of cooking, hermetically sealing, and preserving green corn without drying the same. In preserving green sugar-corn by first enclosing and hermetically sealing it in cans, and then boiling the same until the corn is thoroughly cooked. I have found it necessary to use very strong cans, because of their liability to burst from the expansion of the air and the production of steam within the cans. After the corn is thus cooked, the heads or ends of the cans, upon being cooled, remain pressed outward, so as to give the cans the appearance of containing the gaseous products of spoiled corn. This appearance of the cans is very objectionable to the trade, all dealers and most purchasers being prejudiced against such cans, supposing them to contain spoiled corn. In order to remedy the difficulty of bursting the cans, and to enable dealers to apply to my cans of corn the common test by which they judge whether fruits or other substances (which are cooked previous to being hermetically sealed) are in good condition, I have invented an improved process, by which the cans are relieved from the internal expansive pressure, and at the same time the aroma and juices of the corn are substantially prevented from escaping.

My improved method of preserving green corn may be practiced as follows: Select the sweet variety of Indian corn or maize just in the milk state, and remove the kernels from the cob; this may be most con-

veniently done by means of a curved knife, invented for the purpose. Then pack the corn in cans and hermetically seal the latter. Now expose the cans to boiling water or steam-heat for a short time, say about ten minutes, and then puncture each can so as to allow the air to escape from the cans, and then seal each can immediately up, to prevent the escape of the aroma of the corn or the evaporation of its
19 juices. After re-sealing the cans, the heat should be continued until the corn is thoroughly cooked, say about four hours. After the process of cooking is completed, the cans may be slowly cooled in a warm room.

Corn preserved in this way appears to be quite as sweet and of the same fine flavor as corn preserved without puncturing the cans, as described in another application for letters-patent made by me. This process now presented possesses two advantages over the process described in the application above mentioned. 1st. It removes from the can the pressure caused by the expansion of the contained air, and renders the latter less liable to burst when boiled. 2d. It enables the purchasers of the preserved corn to apply the same test to it that they usually apply to other articles preserved in cans, namely, the concavity of the ends or heads of the cans; such heads being convex with cans not punctured during the process of cooking. Of course I do not confine myself to any precise time for puncturing the cans, though I recommend the time above mentioned. A very good article of preserved corn may be obtained by filling and sealing the cans, leaving a small vent or puncture, yet the resulting article will be inferior to that made by the process above described. Having thus fully described my invention, what I claim and desire to secure by letters-patent of the United States is: Preventing the bursting of hermetically-sealed cans or other vessels whilst they are exposed to heat for cooking or preserving their contents, by means of puncturing such cans or vessels when first heated, or otherwise giving vent to the contained air soon after heating, the cans or vessels being thereafter immediately resealed, and the heat continued, substantially in the manner and for the purposes set forth.

ISAAC WINSLOW.

Witnesses:
WM. HINKLE.
WILLIAMS OGLE.

20 And your orator avers that, by virtue of the conveyances and assignments hereinbefore set forth, he became and now is entitled to and possessed of the full and exclusive right of and liberty of making, using, constructing, and vending to others to be used, the improvements described and claimed in the said schedules annexed to said letters-patent, within and for the State of Maine, for the term of seventeen years from the dates of said letters-patent; and also the exclusive right to all damages, and claims for damages, for or growing out of the infringement of said letters-patent within the said State of Maine; and is authorized and empowered to prosecute for, in his own name, and recover to his own use, said claims for damages for infringements of said patents; and is entitled to sue and recover in this suit, and to receive to his own use, all the damages and profits for which the defendant is liable for the unlawful use or manufacture or vending by him, since the dates of the said letters-patent.

And your orator avers that he has for a long time, to wit, for the period of five years, been in the exclusive possession of the said improvements in preserving green corn, as set forth in the said letters-

patent, and that he has for a long time compounded, used, and sold the same, for the period of five years; that the said exclusive right of your orator in the said improvements and invention, as set forth and described in said letters-patent, have been long acquiesced in and recognized by persons dealing in these goods, and by others, and that the said invention and letters-patent are of great and increasing value. That your orator has granted licenses for compounding and selling his improvements to various parties, and has received compensation therefor; that the said improvements in preserving green corn, of your orator, has long been publicly sold as an article of trade, and is well known and understood in the market and by those persons accustomed to
21 deal in such goods. That your orator has granted licenses for the manufacture and sale of his said improvements to Samuel Rumery and Geo. Burnham, of Portland, in the district of Maine, and to Wm. Davis and J. P. Baxter, of said Portland, and that he has received payment therefor from the said licensees, at the rate of five hundred dollars per annum, for said licenses.

And your orator further avers that, since the 13th day of September, 1867, well knowing the premises, and well knowing the rights and privileges secured to said Winslow, and of the said John W. Jones, so as above set forth, secured to him, and to deprive him of the rights, profits, benefits, and advantages that might otherwise and would have accrued to him, the said John W. Jones, the said H. Clark, at Wiscasset, in the said State of Maine, without the license or permission of your orator, or of the said Isaac Winslow, and against the wish of your orator, has unlawfully and wrongfully worked and caused to be worked, in the process of preserving green corn, the improvements so patented and described, and claimed in the before-recited letters-patent. And your orator avers that the defendant has derived and received, and is still deriving and receiving from the working of the said improvements for preserving green corn, described and claimed in the said letters-patent and the schedules thereto, great gains and profits, but what amount your orator is ignorant, and prays that the defendant may be required to make disclosure thereof.

And your orator avers that the defendant continues to work said improvements so described in said letters-patent, and refuses to desist from such working of said process, or to pay your orator the said gains and profits; and is still injuring your orator, and has deprived, and is still depriving your orator from obtaining and receiving the gains and profits from the use of the improvements claimed in the said
22 letters-patent, so granted to the said Isaac Winslow, which your orator, but for such acts of the defendant, would have obtained and received. And your orator prays that the defendant may be compelled, by a decree of this court, to account for and pay over to your orator all such gains and profits as have accrued or arisen to, or been earned or received by, the defendant, and all such gains and profits as he may be entitled to by means of such use by him of said improvements in preserving green corn, claimed in the specification of claims annexed to said letters-patent, and all such profits and gains as your orator would have received but for such unlawful acts and doings of the defendant; and that the defendant and his attorneys, solicitors, servants, agents, and workmen may be perpetually enjoined and restrained by the decree and injunction of this court, from working, or causing to be worked, any process embodying or containing any of the inventions and improvements described and claimed in the schedules annexed to the said letters-patent, and from infringing and violating in any way the

or that said assignment was or is duly recorded in the Patent-Office of the United States.

And, answering further, this respondent saith that, without his knowledge and consent, his foreman put up certain parcels of green corn, preserved substantially as in the process described in the specifications and covered by the patents of the said Isaac Winslow, and on his information and belief amounting to seven hundred cans, or thereabouts, which have been sold, and the proceeds and profits of which have been received, as contained in the schedule hereunto annexed, and all since the 13th day of September, A. D. 1867, and without the license and permission of complainant; but this respondent denies that he has received any other or greater profits than what he has hereinafter set out, or that he is still deriving any other benefit or receiving any profit than as aforesaid; or is making or using the improvements described under the patents of the said Isaac Winslow, or in any manner infringing on the process thereof; or that he is in any way still depriving complainant of obtaining and receiving the gains and profits of the use of the improvements in the letters-patent aforesaid.

And this respondent, answering further, saith that he has been informed, and on said information believes, and on said belief alleges, that the said letters-patent to the said Isaac Winslow are a fraud in law, and were so obtained by wrong, after application therefor had been rejected by the Patent-Office of the United States, and without appeal, of all which the said John Winslow Jones was cognizant. And further, on his said information and belief, this respondent denies that the said Isaac Winslow was the original and first inventor of the things claimed in his said letters-patent; or that the said Jones has ever been possessed of the full and exclusive use and enjoyment of the alleged new and useful improvements embraced in said letters; or that he has been
27 so possessed thereof, for the period of five years, as in his said bill he has set up; or that the said alleged exclusive use and possession of the said alleged new improvements and inventions claimed have been generally acquiesced in or recognized by the public; and, on his said information and belief, this defendant avers that if the said Jones hath granted licenses (of which this defendant doth not know) for compounding and selling said alleged new and useful improvements, the compensation therefor was a nominal consideration and collusive; and that the said Samuel Rumery and George Burnham, and the said William Davis, and J. P. Baxter, of Portland, alleged licensees, for the sum of five hundred dollars each, annually, as alleged, have so paid the said several sums of five hundred dollars, if at all, to give color and force in law and equity to the claims of the said Jones under said letters-patent, and in order to create a monopoly and make investment in the profits thereof, for their own benefit.

And this defendant, answering further, saith that the said alleged new and useful improvements, or material and substantial parts thereof, are old methods applied to a new purpose, and a new application of well-known processes; and that said improvements, or substantial and material parts thereof, are frivolous, and were well known and used prior to the alleged discovery and invention thereof by the said Isaac Winslow, or the application of the said Winslow and the issue of letters-patent thereon; and long before had been fully described in public works and printed publications within the United States and Europe, viz:

Ure's Dictionary, Am. Ed., 1856, pp. 128, 9, 30; K. A. L. Zir., Leibig's Complete Works on Chemistry, chap. 7, p. 101, Phila., 1840–41; Turner's Chemistry, V. Am. from V. London Ed., A. D. 1835, sec. 7, pp. 635, 6; Webster's Dictionary Unabridged, "Succotash;" "Cornelius'

28 House-keeper's Friend," Boston Ed., pp. 31, 179, 180, A. D. 1859; Mackenzie's Five Thousand Receipts, Phila. Ed., p. 394; U. S. Patent-Office Letter files, April to Nov. 19, 1853.

And in further answer, respondent saith, on his information and belief, that for more than two years before the application of the said Isaac Winslow for the said letters-patent and the issuing of the same, the said alleged new and useful improvements in preserving green corn, or substantial and material parts thereof, if discovered by the said Isaac Winslow, as alleged in complainant's bill, had been by him abandoned to the public and gone into its use, manufacture, and sale, within the United States, and were not, and since have not been forgotten, nor have they been in the secret and exclusive use of the said patentee or of the said Jones, but said improvements, or substantial and material parts thereof, had passed into general use, and were so used by the persons and parties and at the places following, viz: Nathan Winslow, at Portland, in the State of Maine; Aaron Ring, Thomas G. Webber, and David P. Ring, at or near Portland; Ford and Baker, also at Portland; Aaron Kemp, New York City; John and Samuel Barberick, at Portland; William K. Lewis & Co., Boston, Mass.; Henry M. Hartshorn, Cambridge, Mass.; W. T. Trundy, Portland; and, therefore, this respondent denies that said letters-patent are valid in law, or that the said Isaac Winslow or the said complainant have acquired any exclusive rights in virtue thereof. And this respondent, in further answer, saith that, for the reasons and upon the facts stated hereinbefore, he is informed and believes and avers that this complainant has no right to maintain his said bill of complaint, or is entitled to any relief by injunction thereunder as prayed for, and thereupon prays that all the material questions of fact arising in virtue of this his answer may be tried by a jury, under direction of this honorable court; without this,

29 that there is any other material cause or thing in complainant's bill contained, material or necessary for this respondent to make answer to, and not herein well and sufficiently answered, confessed, traversed or denied, is true to the knowledge and belief of this respondent; all which matters and things this respondent is ready and willing to aver, maintain, and prove, as this honorable court shall direct.

Wherefore he prays to be dismissed, with his reasonable costs and charges, in this behalf wrongfully sustained.

HENRY CLARK.

RUFUS K. SEWALL,
Solicitor for Respondent.

FEB. 29, A. D. 1869.

MAINE DISTRICT, *ss*:

Personally appeared Henry Clark, and made oath that he has read the foregoing answer by him subscribed, and that the facts therein stated as of his own knowledge are true, and as to those stated on his information and belief, he believes to be true. Before me,

SAMUEL E. SMITH,
Special Com'r of the U. S. for Me. Dist.

Account.

Canning corn in account with H. Clark.

1867, Sept.—By amount of profit on canning 700 cans under the Jones patent, including all expenses of canning the same $32 18

Said cause was thence continued to April term, A. D. 1868, when the following motion to amend plaintiff's bill is filed, viz:

30 UNITED STATES OF AMERICA.

Circuit court of the United States for the district of Maine. April term, 1868.

To the honorable the judges of the said court:

The petition of J. P. Baxter, Wm. G. Davis, and Samuel Rumery, of Portland, in said district, respectfully showeth that, on the eighth of February, 1868, they became owners of a certain interest and share in the patents of J. W. Jones for certain improvements in preserving green corn; that a suit is now pending in said court upon said patents, in which the said J. W. Jones is plaintiff and Henry Clark is defendant. They therefore ask leave to become parties complainant in said suit and bill, together with said Jones, and to insert their names in said bill.

Per attorney,

W. H. CLIFFORD.

Said motion is agreed to, and the respondent is also allowed to amend his answer, as appears by the following agreement, (the title of all said parties, plff., in said letters-patent being admitted,) viz:

Circuit court of the United States for Maine district. April term, 1868.

J. W. JONES
v.
HENRY CLARK.

It is hereby agreed in the above-entitled cause that the plaintiff has leave to amend his bill, by the insertion of the names of J. P. Baxter, William G. Davis, Samuel Rumery, and by the insertion of a description of the assignments by which the said parties acquired a right in the patents on which the suit is brought; also that defendant may
31 make such amendments as are necessary to make this answer responsive to the bill as thus amended.

WILLIAM H. CLIFFORD,
Complainant's Counsel.
R. K. SEWALL,
Respondent's Counsel.

APRIL 23, 1868.

And on the fourth day of May, A. D. 1868, the following amendments to the bill are filed, viz:

1. By inserting at the bottom of page 19 the following: "And the said J. W. Jones thereafterward, on the 8th of Feb., 1868, by an assignment of that date, duly executed and recorded, did assign one-third of all his right, title, and interest in said patents to J. P. Baxter and Wm. G. Davis, of said Portland; to which assignments, or a certified copy thereof, the said complainants crave leave to refer. And the said complainants further aver, that by an assignment of the same date he did assign one-third of his right, title, and interest in said patents to Samuel Rumery, of said Portland, which said assignment was duly executed and recorded, and to which the said complainants crave leave to refer."

2. By changing the word "he," wherever it occurs referring to the said J. W. Jones, to "they."

Amendments to answer.

United States circuit court—in equity.

MAINE DISTRICT, *ss:*

JOHN WINSLOW JONES ET ALS., COMPLAINANTS,
v.
HENRY CLARK. } In equity.

And now comes the said respondent, after amendment of the bill of complaint in said cause, and amends his answer to said bill as follows, to wit: By inserting after the words, on page 25, "but that the said John Winslow Jones," the words "James P. Baxter, William G. Davis,
32 and Samuel Rumery;" also on page 26, after the words "covered by the," by inserting the word "alleged;" also by inserting after the words "and were so" and before the word "obtained," on page 26. the word "fraudulently;" also by inserting after the words "the alleged new and useful improvements," on page 26, the words "and alleged inventions as embraced in said letters-patent and the specifications thereof, as set forth in said bill of complaint;" also by inserting after the words, on page 27, "and that said improvements" the words "and alleged inventions."

Also by inserting after the words, on page 27, "parts thereof are frivolous," immediately following, the words "and were without ingenuity, skill, and invention on the part of the said Winslow."

Also by inserting after the words "Letter Files, April to November, 1853," on page 28, the words and figures following, viz: "Also in English letters-patent issued to Peter Durand in 1810, and printed and described in the English Patent-Laws, vol. 32, No. 3374; also in English letters-patent issued to Henry Gunter, and printed and described in English Patent Laws in 1841, vol. 90, No. 8776; also in English letters-patent issued to John Wedheimer, and printed and described in English Patent Laws, 1841, vol. 91, No. 8874; also in English letters-patent issued to the same John Wedheimer, and printed and described in English Patent Laws, 1839, vol. , No. 8378; also in Tomlinson's Cyclopedia, article 'Food,' page 607, *et seq.*"

Also by inserting after the words "and were well known and used," page 27, the words "in the United States long."

Also, on page 28, by inserting after the words "improvements in green corn" the words "and alleged inventions above named," and after the words "within the United State" the words "with the knowledge and consent of said Winslow."

33 Also, on page 28, by inserting after the words "and material parts thereof," the words "were known to others than the patentees and;" after the words "and were so used" the words "and known to;" after the words "Nathan Winslow" the words "formerly of Portland, now deceased;" after the words "Aaron Ring" the words "of Wiscasset;" after the words "Aaron Kemp" the words "of New York, at;" after the words "Samuel Barberick" the word "of Portland;" after the words "Henry M. Hartshorn" the words "of Cambridge, at;" after the words "W. T. Trundy," and before the word "Portland," the words "of Portland;" after the word "Portland," and before the words "and therefore," the word "Maine;" and the words and figures following, to wit: "and also said alleged new inventions and improvements and manufacture described in said letters-patent were,

long prior to the dates of the issuing of said patents, and prior to the invention and discovery of the alleged improvements, inventions, and manufacture by said Winslow, known and used as aforesaid by Charles Mitchell, of Boston, Massachusetts, and by him used in Scotland and in the province of New Brunswick, and in Eastport and near Eastport, in the State of Maine, in Charlestown, in the commonwealth of Massachusetts, and in Boston, in said Massachusetts.

"To Jean Louis Renaldo Bertrand, of New York City, and by him used in Paris, France, and in the city and State of New York.

"To Samuel Rumery, of Portland, and by him used at Eastport, at Westbrook, and at Portland, in the State of Maine.

"To Noble, Treat and Company, of Eastport aforesaid, and by them used at said Eastport.

"To George Burnham, of Portland, Maine, and by him used at said Portland.

34 "To Isaac Reckham, of New York, and by him used in the city and State of New York.

"To George W. Day, and to Kemp, Day and Company, of New York, and by them used at Portland, Maine, at Eastport, Maine, and in New York and Baltimore.

"To Stephen W. Prevost, of New York, and by him used in Portland, aforesaid, and in the city of New York.

"To Samuel L. Pierce, of Boston, aforesaid, and by him used in said Boston.

"To Charles J. Underwood, of said Boston, and by him used in Eastport, Maine, in Charlestown, Massachusetts, and in Boston aforesaid.

"To Esther C. Gore, of Edgecomb, State of Maine, and by her used in said Edgecomb.

"To George F. Lewis, of Portland, and by him used in Boston, Massachusetts, and in Portland, Maine.

"To Louis Bernard, of the city and State of New York, by him used in Paris, France, and in said city of New York.

"To Charles L. Marean, John D. Oates, J. Irving, Albion K. Robinson, Benjamin F. Elliot, all of Portland, in the State of Maine, and by them used in said Portland.

"To Nancy Chase and Esther G. Haff, of Edgecomb, State of Maine, and by them used at said Edgecomb.

"To Charles F. Morrill, of said Portland, and by him used at said Portland, and at Westbrook, Maine.

"To Noble and Treat, of Eastport, Maine, and by them used at said Eastport.

"To J. B. Hamblin, of Boston aforesaid, and by him used in Eastport, Maine, at said Boston, and at Charlestown aforesaid."

Also by inserting on page 28, after the words "have acquired any exclusive rights in virtue thereof," the words following:

35 "And this respondent, further answering, saith that said letters-patent, in said bill of complaint mentioned and described, are void; and that the said several patents describe substantially the same alleged inventions, although issued at several dates; and that said patents embrace, as a part of the alleged invention and discovery of the said Winslow, that which was well known and in public use long before the pretended discovery of the said Winslow; and the same was fraudulently claimed by the said Winslow as a part of his said invention and discovery; and the respondent denies that the manufacture described and claimed in the letters-patent mentioned in said bill is a new and useful manufacture."

The answer, as amended, is as follows, viz:

Circuit court of the United States within and for the district of Maine:

36 JOHN WINSLOW JONES
v.
HENRY CLARK. } In equity.

This defendant, now and at all times hereafter saving and reserving to himself all benefit and advantage of all exceptions which can or may be had or taken to the many errors, uncertainties, and other imperfections in said complainant's bill, for answer thereunto, or unto so much or such parts thereof as this defendant is advised is or are material or necessary, answering, saith:

That he has been informed, and on said information believes, certain letters-patent of the United States of America, bearing dates the 8th of April, 13th of May, 20th of May, and 25th Aug., 1862, on the application of one Isaac Winslow, of Philadelphia, covering certain alleged new and useful improvements in preserving green corn, were procured to be issued, under seal of the Patent-Office of the United States; but that the said John Winslow Jones, James P. Baxter, William G. Davis, and Samuel Rumery have any legal interest, right, or title therein, to compel this defendant to answer in his said bill of complaint doth not appear, the said Jones not having therein averred and shown that for the said alleged assignment, sale, and transfer of the interest and title of the said Winslow to him, the said Jones, therein set up, there was paid any valuable consideration, to pass said interest and title; or that said assignment was or is duly recorded in the Patent-Office of the United States.

37 And, answering further, this respondent saith, that without his knowledge and consent, his foreman put up certain parcels of green corn, preserved substantially as in the process described in the specifications and covered by the alleged patents of the said Isaac Winslow, and on his information and belief amounting to seven hundred cans, or thereabouts, which have been sold, and the proceeds and profits of which have been received as contained in the schedule hereunto annexed, and all since the 13th day of September, A. D. 1867, and without the license and permission of complainant; but this respondent denies that he has received any other or greater profits than what he has hereinafter set out, or that he is still deriving any other benefit or receiving any profit than as aforesaid; or is making or using the improvements described under the patents of the said Isaac Winslow, or in any manner infringing on the process thereof; or that he is in any way still depriving complainant of obtaining and receiving the gains and profits of the use of the improvements in the letters-patent aforesaid.

And this respondent, answering further, saith that he has been informed, and on said information believes, and on said belief alleges, that the said letters-patent to the said Isaac Winslow are a fraud in law, and were so obtained by wrong, after application therefor had been rejected by the Patent-Office of the United States, and without appeal, of all which the said John Winslow Jones was cognizant. And further, on his said information and belief, this respondent denies that the said Isaac Winslow was the original and first inventor of the things claimed in his said letters-patent; or that the said Jones has ever been possessed of the full and exclusive use and enjoyment of the alleged new and useful improvements and alleged inventions as embraced in said letters-

patent and the specifications thereof, as set forth in said bill of
38 complaint; or that he has been so possessed thereof for the period of five years, as in his said bill he has set up; or that the said alleged exclusive use and possession of the said alleged new improvements and inventions claimed have been generally acquiesced in, or recognized by the public; and on his said information and belief, this defendant avers that if the said Jones hath granted licenses (of which this defendant doth not know) for compounding and selling said alleged new and useful improvements, the compensation therefor was a nominal consideration and collusive, and that the said Samuel Rumery and George Burnham, and the said William Davis and J. P. Baxter, of Portland, alleged licensees, for the sum of five hundred dollars each annually, as alleged, have so paid the said several sums of five hundred dollars, if at all, to give color and force in law and equity to the claims of the said Jones under said letters-patent, and in order to create a monopoly and make investment in the profits thereof for their own benefit.

And this defendant, further answering, saith that the said alleged new and useful improvements and alleged inventions, or material and substantial parts thereof, are old methods applied to a new purpose and a new application of well-known processes; and that said improvements, or substantial and material parts thereof, are frivolous, and were without ingenuity, skill, and invention on the part of the said Winslow, and were well known and used in the United States long prior to the alleged discovery and invention thereof by the said Isaac Winslow, or the application of the said Winslow and the issue of letters-patent thereon; and long before had been fully described in public works and printed publications within the United States and Europe, viz:

39 Ure's Dictionary, Am. ed., 1856, pp. 128, 9, 30; K. A. L. Zir., Liebig's Complete Works on Chemistry, Chap. 7, p. 101, Phila., 1840–41; Turner's Chemistry, V Am. from V London Ed., A. D. 1835, sec. 7, pp. 635, 6; Webster's Dictionary Unabridged, "Succotash;" "Cornelius' House-keeper's Friend," Boston ed., pp. 31, 179, 180, A. D. 1859; Mackenzie's Five Thousand Receipts, Phila. ed., p. 394; U. S. Patent-Office letter-files, April to Nov. 19, 1853.

Also in English letters-patent, issued to Peter Durand in 1810, and printed and described in the English Patent Laws, vol. 32, No. 3374; also in English letters-patent, issued to Henry Gunter, and printed and described in English Patent Laws, in 1841, vol. 90, No. 8776; also in English letters-patent, issued to John Wedheimer, and printed and described in English Patent Laws, 1841, vol. 91, No. 8874; also in English letters-patent, issued to the same John Wedheimer, and printed and described in English Patent Laws, 1839, vol. , No. 8378; also in Tomlinson's Cyclopedia, article "Food," page 607, et seq.

And in further answer respondent saith, on his information and belief, that for more than two years before the application of the said Isaac Winslow for the said letters-patent and the issuing of the same, the said alleged new and useful improvements in preserving green corn, and alleged inventions above named, or substantial and material parts thereof, were known to others than the patentees, and if discovered by the said Isaac Winslow, as alleged in complainants' bill, had been by him abandoned to the public, and gone into its use, manufacture
40 and sale within the United States, with the knowledge and consent of said Winslow, and were not, and since have not been forgotten, nor have they been in the secret and exclusive use of the said patentee or of the said Jones, but said improvements, or substantial and material parts thereof, were known to others than the patentees, and

had passed into general use, and were so used and known to the persons and parties and at the places following, viz: Nathan Winslow, formerly of Portland, now deceased, at Portland, in the State of Maine; Aaron Ring, of Wiscasset; Thomas G. Webber and David P. Ring, at or near Portland; Ford & Baker, also at Portland; Aaron Kemp, of New York, at New York City; John and Samuel Barbrick, of Portland, at Portland; William K. Lewis & Co, Boston, Mass.; Henry M. Hartshorn, of Cambridge, at Cambridge, Mass.; W. T. Trundy, of Portland, Maine, at Portland; and also said alleged new inventions and improvements and manufacture described in said letters-patent were long prior to the dates of the issuing of said patents, and prior to the invention and discovery of the alleged improvements, inventions and manufacture by said Winslow, known and used as aforesaid by Charles Mitchell, of Boston, Massachusetts, and by him used in Scotland, and in the Province of New Brunswick, and in Eastport, and near Eastport, in the State of Maine, in Charlestown, in the commonwealth of Massachusetts, and in Boston, in said Massachusetts.

41

To Jean Louis Renaldo Bertrand, of New York City, and by him used in Paris, France, and in the city and State of New York.

To Samuel Rumery, of Portland, and by him used at Eastport, at Westbrook, and at Portland, in the State of Maine.

To Noble, Treat and Company, of Eastport aforesaid, and by them used at said Eastport.

To George Burnham, of Portland, Maine, and by him used at said Portland.

To Isaac Reckham, of New York, and by him used in the city and State of New York.

To George W. Day, and to Kemp, Day and Company, of New York, and by them used at Portland, Maine, at Eastport, Maine, and in New York and Baltimore.

To Stephen W. Prevost, of New York, and by him used in Portland, aforesaid, and in the city of New York.

To Samuel L. Pierce, of Boston, aforesaid, and by him used in said Boston.

To Charles J. Underwood, of said Boston, and by him used in Eastport, Maine, in Charlestown, Massachusetts, and in Boston, aforesaid.

To Esther C. Gore, of Edgecomb, State of Maine, and used by her in said Edgecomb.

To George F. Lewis, of Portland, and by him used in Boston, Massachusetts, and in Portland, Maine.

42

To Louis Bernard, of the city and State of New York, by him used in Paris, France, and in said city of New York.

To Charles L. Marean, John D. Oates, J. Irving, Albion K. Robinson, Benjamin F. Elliot, all of Portland, in the State of Maine, and by them used in said Portland.

To Nancy Chase and Esther G. Haff, of Edgecomb, State of Maine, and by them used in said Edgecomb.

To Charles F. Morrill, of said Portland, and by him used at said Portland and at Westbrook, Maine.

To Noble and Treat, of Eastport, Maine, and by them used at said Eastport.

To J. B. Hamblin, of Boston, aforesaid, and by him used in Eastport, Maine, at said Boston and at Charlestown, aforesaid.

And therefore this respondent denies that said letters-patent are valid in law, or that the said Isaac Winslow or the said complainant have acquired any exclusive rights in virtue thereof.

And this respondent, further answering, saith that said letters-patent in said bill of complaint mentioned and described, are void, and that the said several patents describe substantially the same alleged inventions although issued at several dates, and that said patents embrace, as a part of the alleged invention and discovery of the said Winslow, that which was well known and in public use long before the pretended discovery of the said Winslow, and the same was fraudulently claimed by the said Winslow as a part of his said invention and discovery, and the respondent denies that the manufacture described and claimed in the letters-patent mentioned in said bill is a new and useful manufacture.

43 And this respondent, in further answer, saith that for the reasons, and upon the facts stated hereinbefore, he is informed and believes and avers, that this complainant has no right to maintain his said bill of complaint, or is entitled to any relief by injunction thereunder as prayed for, and thereupon prays that all the material questions of facts arising in virtue of this his answer may be tried by a jury, under direction of this honorable court. Without this, that there is any other material cause or thing in complainants' bill contained, material or necessary for this respondent to make answer to, and not herein well and sufficiently answered, confessed, traversed, or denied, is true, to the knowledge and belief of this respondent. All which matters and things this respondent is ready and willing to aver, maintain, and prove, as this honorable court shall direct.

Wherefore he prays to be dismissed, with his reasonable costs and charges in this behalf wrongfully sustained.

HENRY CLARK.

RUFUS K. SEWALL,
Solicitor for Respondent.

And on the sixteenth day of May, A. D. 1868, the following general replication is filed, viz:

44 UNITED STATES OF AMERICA:

Circuit court of the United States, district of Maine.

The replication of J. W. Jones et als., complainants, to the answer of Henry Clark, respondent.

These repliants, saving and reserving unto themselves all and all manner of advantage of exception to the manifold insufficiencies of said answer, for replication thereunto, say that they will aver and prove their said bill to be true, certain, and sufficient in the law to be answered unto, and that the said answer of the said defendant is uncertain, untrue, and insufficient to be replied unto by these repliants; without this, that any other matter or thing whatsoever in the said answer contained material or effectual in the law to be replied unto, confessed and avoided, traversed or denied, is true. All which matters and things these repliants are and will be ready to aver and prove as this hon-

45 orable court shall direct, and humbly pray as in and by their said bill they have already prayed.

J. W. JONES.
J. P. BAXTER.
WM. G. DAVIS.
SAMUEL RUMERY.

Per attorney,
W. H. CLIFFORD.

Said cause is continued thence from term to term, until September term, A. D. 1869, when the insanity of the respondent being suggested, the said Rufus K. Sewall is appointed guardian of said Henry Clark ad litem, and said cause is thence continued from term to term to September, A. D. 1871, when the death of the respondent is suggested, and said Rufus K. Sewall, as his administrator, appears to defend the said suit. And now, to wit, on the nineteenth day of January, A. D. 1872, the parties agree that the testimony in said cause is closed, and publication thereof is ordered, and published accordingly. Said cause is then continued to April term, in the year of our Lord eighteen hundred and seventy-two, when, to wit, on the fifth day of July, of the same year, by adjournment, the same came on for hearing and was fully heard and argued by counsel before Mr. Justice Clifford, and held under advisement by the court; and said cause was continued to September term
46 in the year of our Lord eighteen hundred and seventy-two, and thence continued to the present April term, in the year of our Lord eighteen hundred and seventy-three. And on the seventeenth day of May, of the same year, the opinion and decision of the court was promulg'ed to the effect that the complainants are entitled to a decree for an account, and to an injunction. The death of Samuel Rumery, one of the complainants, is suggested, and Frederick Fox, his administrator, enters his appearance in said suit to prosecute the same.

And at a session of the court, holden by adjournment, on the ninth day of June then next ensuing, the following decree is passed and entered, to wit:

Circuit court of the United States, district of Maine, April term, 1873.
In equity.

JOHN W. JONES ET ALS., COMPLAINANTS,
vs.
RUFUS K. SEWALL, ADM'R OF HENRY CLARK, defendant.

47 *Decree for perpetual injunction and reference to a master.*

This cause came on to be heard at the April term, A. D. 1872, upon the pleadings and proofs, and was argued by counsel for the respective parties, upon consideration whereof it is ordered, adjudged, and decreed as follows, viz: That two of the letters-patent referred to in the complainants' bill, being letters-patent of the United States granted unto Isaac Winslow, assignor of John W. Jones, to wit: Letters-patent No. 34,928, dated April 8, 1862, and letters-patent numbered 35,274,
48 and dated May 13, 1862, are good and valid patents, but that the said other two letters-patent referred to in complainants' bill of complaint, to wit, Patent No. 35,346, dated May 20, 1862, and Patent No. 36,326, dated August 26, 1862, are void patents, because granted for substantially the same invention as the patent No. 35,274, dated May 13, 1862, and that the said Isaac Winslow was the original and first inventor of the improvements described and claimed in the said letters-patent numbered 34,928 and 35,274; and that the said defendant hath infringed the said patents, and upon the exclusive rights of the complainants under the same.

And it is further ordered, adjudged, and decreed that the complainants recover of the defendant the profits which he hath received
49 or made, or which have accrued to him from said infringement by

the manufacture, use, or sale of the improvements described, and secured by said letters-patent, at any and all times since the thirteenth day of September, A. D. 1867, and also the damages, if any, which the complainants have sustained thereby.

And it is further ordered, adjudged, and decreed that it be referred to George F. Emery, a master of the court, to take and report to the court an account of the profits which the said defendant has received, or which have arisen or accrued to him from said infringement
50 of said patented improvements upon which the patents have been adjudged valid as aforesaid, and to ascertain and report the damages which the complainants have sustained thereby since the thirteenth day of September, A. D. 1867.

And it is further ordered, adjudged, and decreed that a perpetual injunction be issued against the defendant according to the prayer of the bill in respect to the two letters-patent adjudged valid.

And it is further ordered, adjudged, and decreed that the complainants recover of the defendant their costs of suit.

By the court.

Attest: GEO. F. EMERY,
Clerk.

And on the twenty-third day of June aforesaid, the master's
51 report is filed, and is as follows, to wit:

MAINE DISTRICT, *ss:*

Circuit court U. S.

JOHN W. JONES ET ALS.
vs.
RUFUS K. SEWALL, ADR. OF HENRY CLARK. } In equity.

Master's report.

Pursuant to a decretal order passed by said court on the ninth day of June, A. D. eighteen hundred and seventy-three, in the above-entitled cause, the undersigned master has the honor to report—

That, at a hearing before him, pursuant to notice, on the twentieth day of June aforesaid, the defendant denied liability under said
52 decretal order for any amount other than what is admitted in the answer in said cause and the schedule thereto annexed; and no further evidence having been produced before the master, either on the part of the plaintiffs or defendant to vary that result, said master has ascertained and accordingly reports, that the total amount of profits and damages which the plaintiffs have sustained, and are entitled to recover of the defendant by virtue of the infringements for which by the decree of said court said defendant is liable, is the sum of thirty-two dollars and eighteen cents aforesaid.

Respectfully submitted by—

GEO. F. EMERY,
Master.

JUNE 20, 1873.

And, thereupon, the following final decree was passed and entered, viz:

53 MAINE DISTRICT, *ss:*

Circuit court U. S., April T., 1873. Holden by adjournment June 23d.

JOHN W. JONES ET ALS.
vs.
R. K. SEWALL, ADMR. OF HENRY CLARK. } In eq.

Upon the coming in of the report of Geo. F. Emery, one of the masters of this court, in pursuance of the decretal order of said court therein referred to, it is ordered, adjudged, and decreed that the said report of said master do stand ratified and confirmed by the order, authority, and decree of this court; and that the complainants recover of the respondent the sum of thirty-two dollars and eighteen cents
54 damages, and costs of suit taxed at six hundred sixty-nine dollars and sixty-one cents, and that execution issue therefor, and that a writ of injunction do issue against the defendant in accordance with the decree of this court.

By the court.
Attest:

GEO. F. EMERY, *Clerk.*

And now, after final decree, the respondent, on the day of the entry thereof, claims an appeal, as follows, viz:

Circuit court of the United States, district of Maine. In equity.

JOHN W. JONES ET ALS.
v.
RUFUS K. SEWALL, ADMINISTRATOR OF ESTATE Henry Clark.

And now comes the defendant, against whom a decree has been
55 entered in the above-entitled cause, and claims an appeal to the Supreme Court of the United States, next to be holden at Washington on the second Monday of October next, and prays that the same may be allowed.

By RUFUS KING SEWALL,
Administrator pro see.

Whereupon said appeal is allowed on condition that the bond required by law be filed in the penal sum of one thousand dollars, with sureties to the satisfaction of the clerk; and on the fourth day of August, A. D. eighteen hundred and seventy-three, the appellants file the following—

Bond.

Know all men by these presents that we, Rufus K. Sewall, of Wiscasset, in the district of Maine, administrator of the goods and estate which were of Henry Clark, late of said Wiscasset, deceased,
56 as principal, and Albion K. Robinson & Winthrop S. Jordan, of Portland, and all in said district of Maine, as sureties, are held and firmly bound unto John Winslow Jones, J. P. Baxter, William G. Davis, and Frederick Fox, administrator of the goods & estate which were of Samuel Rumery, deceased, all of Portland, in said district of Maine, in the full and just sum of one thousand dollars, to be paid to

the said John Winslow Jones, J. P. Baxter, William G. Davis, and Frederick Fox, administrator, and to their heirs, executors, administrators or assigns; to which payment, well and truly to be made, we bind ourselves, our heirs, executors and administrators, jointly and severally, by these presents. Sealed with our seals, and dated this twenty-third day of June, in the year of our Lord eighteen hundred and seventy-three.

Whereas, at a term of the circuit court of the United States
57 for the first circuit, holden at Portland, within and for the district of Maine, on the twenty-third day of April, A. D. eighteen hundred & seventy-three, to wit, by adjournment on the twenty-third day of June aforesaid, in a suit depending in said court, wherein the said John Winslow Jones & others are complainants in equity, and the said Rufus K. Sewall & others are respondents, a final judgment and decree was rendered in favor of said complainants against said respondents, from which the said respondents have appealed to the Supreme Court of the United States, to be holden at Washington on the second Monday of October next:

Now the condition of the above obligation is such that if the said Rufus K. Sewall & others, appellants in said suit, shall prosecute
58 their said appeal to effect, and answer all damages and costs if they shall fail to make good their plea, then the above obligation is to be void; else to remain in full force and virtue.

RUFUS K. SEWALL,
Ad'r Est. H. Clark. [L. S.]
ALBION K. ROBINSON. [L. S.]
WINTHROP S. JORDAN. [L. S.]

Signed, sealed, and delivered in presence of—
PEREZ B. BURNHAM.

MAINE DISTRICT, *ss:*

OFFICE OF THE CLERK C. C. U. S.,
August 4th, 1873.

Filed and appproved.
Attest: GEO. F. EMERY, *Clerk.*

Recorded from the original papers and minutes.
Attest: GEO. F. EMERY, *Clerk.*

59 UNITED STATES OF AMERICA,
Maine district, first circuit:

OFFICE OF THE CLERK OF THE CIRCUIT COURT U. S.

I, Geo. F. Emery, clerk of the circuit court of the United States for the district of Maine, hereby certify that the foregoing is a true and perfect transcript of the record of said court in the suit in equity therein mentioned.

In testimony whereof I have hereunto set my hand and affixed the seal of said court this 6th day of August, A. D. eighteen hundred & seventy-three.

[SEAL.] Attest: GEO. F. EMERY, *Clerk.*

60 The following are the proofs which were before the court at the hearing of the cause mentioned in the foregoing transcript, viz:

Deposition of John W. Jones, for complainants.—Taken January 25, 1871.

State your name, age, residence and occupation, and whether you are plaintiff in this suit.

Ans. John Winslow Jones; age, 43; Westbrook; occupation, packer of canned goods, and am one of the plaintiffs in this suit.

Int. 2. State when you first knew of Isaac Winslow's connection with preserving green corn.

Ans. In 1842.

Int. 3. Where was Mr. Isaac Winslow then residing?

Ans. Philadelphia.

Int. 4. State how and when it was you first knew of his connection with the preserving of green corn.

61 Ans. At my father's (Caleb Jones) place in Westbrook; because Mr. Isaac Winslow wrote to my father to plant a piece of ground with sweet corn. Mr. Winslow wrote from France.

Int. 5. State whether or not Mr. Isaac Winslow visited Westbrook in the fall of that year?

Ans. He did in the season for packing green corn.

Int. 6. What did he do on that visit to your father's house in Westbrook?

Ans. He packed the corn in cans.

Int. 7. Describe the process.

Ans. The process was to cut it from the cob in a raw state with a gauged knife, to then scrape the cob, then to place it in cans without previously cooking it. The cans were then sealed up, and placed in water and cooked.

Int. 8. Did Mr. Winslow produce that process there, or did he seem familiar with it at the outset?

(Counsel for respondents object to the question as leading in form. Withdrawn.)

Int. 8. When, during the visit of Mr. Winslow at your father's, (above spoken of,) did Mr. Winslow commence this process?

Ans. In the fall of 1842, during the season for green corn.

Int. 9. Whether or not you assisted him?

Ans. I did; i. e., I assisted Mr. Winslow.

Int. 10. When did Mr. Winslow next come to Westbrook, to put up any green corn?

Ans. He came the next season, the fall of 1843.

Int. 11. Describe generally what he did that season.

Ans. He made more extended preparations for it—put in steam-tanks for cooking the corn, instead of putting it into water—by direct steam.

Int. 12. In what sort of a vessel was the corn cooked the previous year, 1842?

62 Ans. In a small wash-boiler, at my father's, in Westbrook.

Int. 13. Whether or not you were present with him in the year 1843?

Ans. I was.

Int. 14. What relationship did Isaac Winslow bear to you?

Ans. He was my uncle.

Int. 15. Have you any recollection whether Mr. Isaac Winslow visited Westbrook in 1844?

Ans. He did, and put up some corn, and went back to the water-bath.

Int. 16. Have you any recollection of Mr. Isaac Winslow's visiting Westbrook in 1845?

Ans. Have no particular recollection. He was in the habit of coming every year. I think he was there in 1845.

Int. 17. Do you or not remember of his being at Westbrook any or

all the years from 1846 to 1849, and whether he put up corn any or all of those years?

Ans. I think he was down each of those years, and he put up corn each year, or it was put up under his direction.

Int. 18. What was the process in each or all of these years?

Ans. Substantially the same—cutting it from the cob in the raw state, and putting it into cans in its own juices, and boiling it in soldered tin cans without any admixture.

Int. 19. What were your relations with Mr. Isaac Winslow?

Ans. He was my uncle; knew him very well; was intimate with him both in the business of packing corn and socially.

Cross-examination by Mr. Bradbury:

Int. 1. Have you the letter written by Isaac Winslow from France to your father, and referred to in your 4th answer?

Ans. I have not got it.

63 Int. 2. Did you ever read said letter?

Ans. I have no recollection of reading it myself.

Int. 3. Did you at any time have any correspondence yourself with Isaac Winslow in reference to the process of packing corn?

Ans. I have no recollection of having any correspondence in relation to the process, as it was well understood between us.

Int. 4. How long was Isaac Winslow at your father's house in 1842?

Ans. I cannot say the length of time. He came and immediately packed the corn. Cannot say how long he staid after packing the corn.

Int. 5. Did you have frequent conversations with him while there that year touching his experiments in packing corn?

Ans. I had frequent conversations with him, but he was established in the principle of packing corn. His experiments were confined to the mechanical part.

Int. 6. Did he at any time in the year 1842, in any conversation with you or in your presence, state that he had learned in France the process of preserving vegetables, meats, or other articles in cans, jars, or other vessels?

Ans. He did not.

Int. 7. Did he at any time communicate to you such information?

Ans. He did not.

Int. 8. How are you able to fix the year 1842 as the first year that Isaac Winslow made his first experiments in packing corn?

Ans. I fixed it from circumstances that were taking place at that time—my being at school, my age, &c.

Int. 9. Have you any memorandum in writing by which you could fix that date?

64 Ans. I do not know whether I have any memorandum, in writing fixing that date or not.

Int. 10. What other circumstances than "your being at school and your age" enable you to fix this date?

Ans. I was living at home at the time, and could easily fix it by a train of circumstances connected with the packing of the corn from year to year.

Int. 11. What train of circumstances connected with the packing of corn from year to year enables you to fix that date?

Ans. The year after I was 21 years of age I went into the business myself, and from that time I trace it back through the different stages, as it always has been the business of my life.

Int. 12. Were the experiments of Isaac Winslow in packing corn in the year 1842 successful?

Ans. Comparatively unsuccessful.

Int. 13. What quantity of green corn was packed by him or under his direction, in the year 1842?

Ans. A very small quantity, indeed. Worked but very few days. Cannot give a definite answer. Boiler would hold perhaps a dozen cans, and may be one or two boilings a day. Might have been at work a week.

Int. 14. What was done with the corn packed in that year?

Ans. I think it was put into Mr. Winslow's store on Union wharf; Mr. Nathan Winslow's store; in the attic of the store. I am not sure about the disposal of that year's corn, there was so very little of it, and a large portion of it spoiled before it could be moved at all.

Int. 15. What assistance did you render him in packing the corn in that year?

Ans. I assisted him in every part of the work of packing, except the soldering.

65 Int. 16. Was assistance rendered him by any other person that year?

Ans. He had some one to solder the cans and assist in husking. William Sawyer, I think, did the soldering.

Int. 17. Where was the operation carried on in 1842?

Ans. In what had been an old cord factory, on my father's farm in Westbrook.

Int. 18. Was any of the corn packed that year used, or did it prove entirely unfit for use?

Ans. Some of it kept. The larger portion was unfit for use.

Int. 19. What quantity was used, or what proportion of the whole was used?

Ans. I could not tell, but I am satisfied it was a very small proportion of the whole.

Int. 20. What was the precise process of packing used in 1842?

Ans. The corn was gathered from the field, when just full in the milk; corn was husked; then the corn was cut from the cob by the use of a gauged knife; then the cob was scraped to get the juices and leave the hull on the cob; then it was placed in cans in a raw state without any admixture; then sealed up air-tight, cooked in water by putting the cans in a common wash-boiler of water, and cooking them. The time of cooking varied. No precise time had been established.

Int. 21. Were the cans, after being hermetically sealed, punctured or vented?

Ans. They were not ever.

Int. 22. Was that the uniform mode in which the corn was put up in 1842, or was the method varied?

Ans. That was the uniform way.

Int. 23. How much time did Isaac Winslow spend at your father's in 1843?

66 Ans. He was there considerably longer than in 1842, as far as I can recollect.

Int. 24. Can you state definitely, from your recollection, how long he was there in 1843?

Ans. I cannot.

Int. 25. How much green corn was packed by him in 1843?

Ans. As near as I can recollect, about the same quantity as in the preceding year.

Int. 26. Was the corn packed in the same manner as in the preceding year?

Ans. It was put into the cans in the same manner. Mr. Winslow had during the summer fitted up an apparatus for cooking it by direct steam, and tried cooking them by that process. He fitted a small copper steam-boiler, and then put in large wooden tanks lined with zinc, made perfectly air-tight by a small trap-door that was screwed in; then the cans were placed in this tank without any water, and subjected to a pressure, I should think, of from 15 to 20 lbs. of steam, for various lengths of time. There was no particular length, as it was a matter of experiment.

Int. 27. Were the experiments made by Isaac Winslow in that year successful?

Ans. Almost entirely unsuccessful.

Int. 28. Did the corn packed that year spoil and become unfit for use?

Ans. Most of it did.

Int. 29. Did you in either of the years 1842 or '43 give the subject of preserving fruit, meats, vegetables, or other articles, any personal thought or study, or read any books or pamphlets upon that subject?

(Objected to as immaterial, irrelevant, and calling for matter not inquired of in the direct examination.)

67 Ans. I gave the subject some thought, but could find no books or pamphlets that treated of the subject.

Int. 30. Did you ever see any such books or pamphlets in the possession of Isaac Winslow?

Ans. I never did.

Int. 31. Can you now state, from your personal recollection, whether Mr. Winslow was at your father's in 1844, and whether he was then engaged in packing corn, in 1844?

Ans. He was there.

Int. 32. For what length of time?

Ans. I cannot say distinctly; I should judge a shorter time than the year before.

Int. 33. How much green corn was packed by him or under his direction during that year?

Ans. I should judge a very small quantity; about the same as in the previous years.

Int. 34. Was the process the same as in 1843?

Ans. It was put into cans in the same way, but the steam was abandoned, and it was cooked in water the same as in 1842.

Int. 35. Was that experiment successful?

Ans. The corn packed that year kept better than that packed either of the previous years.

Int. 36. Did not the greater part of it spoil and become unfit for use?

Ans. Some of it spoiled, but I think a larger portion of it kept.

Int. 37. If it, the corn, was packed in the same manner as in 1842, how do you explain the fact that it kept better than in that year?

(Objected to, because witness not being the inventor is not called upon to explain this fact, neither being an expert.)

Ans. I attributed it to his having a better knowledge of the mechanical part of it in 1844 than in 1842.

68 Int. 38. During these years, or subsequently, were you the confidential adviser or agent of Isaac Winslow?

Ans. The first of my having anything to do with him as a confidential agent was, I think, in 1853. I think in 1853 I went into an arrangement with Nathan Winslow under an agreement, when we agreed to pay Isaac Winslow a royalty of one cent on every can packed.

Int. 39. Was that a verbal or a written agreement?

Ans. It was a written agreement.

Int. 40. Is it in your possession?

Ans. I left it with Mr. Clifford during the preliminary examination. Search has been made for it, and it will be annexed to this deposition when found.

(Interrogatories 38, 39, and 40 objected to by Mr. Clifford, as calling for matter not mentioned in the direct examination.)

Int. 41. Was Nathan Winslow the brother of Isaac?

Ans. He was.

Int. 42. Where did he reside?

Ans. He resided in Portland.

Int. 43. What was his business?

Ans. His business up to that time, or very nearly up to that time, 1853, was the stove business. And then he had the charge of his brother's (Jeremiah Winslow's) property in this country.

Int. 44. When and where did he first engage in packing corn?

Ans. As an established business, from 1852 to '53.

Int. 45. Did you and he, at or about that time, become partners in the business of packing corn?

Ans. We became partners in 1853.

(Interrogatories 44 and 45 objected to by Mr. Clifford, as calling for matters not inquired about in the direct examination, and as immaterial.)

69 Int. 46. How long did that partnership continue?

(Same objection as above.)

Ans. I think three or five years—that one.

Int. 47. Was it renewed at the expiration of the first term?

(Same objection as above.)

Ans. It was, and continued up to 1861 or '62.

Int. 48. Prior to that time, 1853, were Isaac Winslow and Nathan Winslow associated in making experiments in packing corn?

Ans. Not to my knowledge; but Nathan Winslow packed some corn previous to that time under the direction of Isaac Winslow.

Int. 49. In what years?

Ans. I think in 1848 and 1849.

Int. 50. Did not Nathan Winslow pack corn under the direction of Isaac as early as 1846?

Ans. I think he did.

Int. 50. From 1846 to 1853, that is, down to the time of the formation of the partnership between yourself and Nathan Winslow, did not Nathan pack corn each year under Isaac's direction?

Ans. I cannot state distinctly whether he did every year or not.

Int. 51. Can you state, from your present recollection, whether Isaac Winslow was at your father's packing corn in 1845?

Ans. I do not recollect whether he packed that year or not.

Int. 52. Can you state, from your present recollection, whether Isaac Winslow was at your father's packing corn in 1846?

Ans. He either packed himself, or Nathan packed under his direction, at my father's in Westbrook.

70 Int. 53. Did you assist in packing the corn in 1846, that is, the corn packed by Isaac or Nathan Winslow?

Ans. I did.

Int. 54. What quantity of corn was packed in 1846?

Ans. About the same quantity as in 1842, and by the same process. I should judge with somewhat better results. The corn was carried to Portland very soon after it was packed.

Int. 55. Whether or not Isaac Winslow was engaged in putting up corn at your father's in 1847, either by himself or by Nathan?

Ans. I cannot state distinctly.

Int. 56. Was, or not, Isaac Winslow or Nathan engaged in packing corn at your father's in 1848?

(As far as the question relates to Nathan Winslow, objected to by Mr. Clifford as irrelevant.)

Ans. Neither of these parties packed at my father's as late as 1848.

Int. 57. At any time after 1848, did Isaac Winslow himself, or through Nathan Winslow, put up corn at your father's?

Ans. I think they did not.

Int. 58. Whether after the year 1847, Isaac Winslow himself, or Nathan Winslow under his direction, packed corn elsewhere than at your father's?

Ans. They did.

Int. 59. When or where did they so pack?

(Inquiry, so far as it relates to time subsequent to 1849, is objected to, because not inquired of in direct examination, and immaterial under the statute.)

Ans. At Congin, in Westbrook, in 1848 or 1849, and all or a portion of the succeeding years.

Int. 60. Did you assist in packing corn at Congin, as in the previous years?

(Same objection as above to int. 59.)

71 Ans. I was frequently over there, but was not regularly employed.

Int. 61. Do you know whether Isaac Winslow was there either or all of these years?

Ans. He was there a portion, but not all of the time.

Int. 62. Can you state any particular year that he was there?

Ans. I think he was there a portion of all the years; cannot say definitely.

Int. 63. Do you know the quantity packed in 1848 or '49 at Congin?

Ans. I cannot definitely; it was very small.

Int. 64. Can you state, from your recollection, about how many cans were packed in 1848 or '49?

Ans. I cannot.

Int. 65. State the quantity packed at Congin in 1850, '51, and 52.

(Objected to as immaterial, and calling for matters not inquired of in the direct examination.)

Ans. I cannot.

Int. 66. Was it large or small?

Ans. I think somewhat more than in any of the previous years.

Int. 68. How much more than in 1842?

Ans. I should judge very much larger; but I have no such knowledge as would enable me to state the exact number of cans.

Int. 69. Was this corn put upon the market at any time after the year 1847 and up to the year 1852?

Ans. Prior to the application for a patent, I know of no corn being put upon the market, (because I had frequent conversations with Isaac Winslow, and he was perfectly aware of the fact that he was not allowed to place it on the market except at a certain time before

72 the date of his application.)

(That part of the answer enclosed in parenthesis objected to as not responsive.)

Int. 70. Whether the process of putting up corn at Congin was the same as that used in 1842?

Ans. It was.

Int. 71. In what year did Isaac Winslow consider his processes perfected?

Ans. As early as 1842 he considered he had the theoretical part, but the mechanical part he did not consider perfected until 1850 or 1851.

Int. 72. In what year did Isaac Winslow first apply for a patent?

Ans. Have memoranda, but do not recollect the date; I think in 1851 or '2.

Int. 73. Were you aware he was about to make an application for a patent?

Ans. I knew from the very first he was intending to apply for a patent.

Int. 74. Do you or not know that his first application was rejected?

Ans. I knew that the patent was not granted at the time of this application at first.

Int. 75. After the rejection of the first application, and before the second application, did Isaac Winslow assign all his interest in his supposed invention of the process of packing green corn to you?

(Objected to as calling for secondary evidence, and assuming matters that are not proved or shown.)

Ans. He assigned the patent to me.

Int. 76. After the assignment to you, did you make an application for a patent in person?

(Objected to as calling for secondary evidence when the best proof can be obtained.)

Ans. I made an application, going for the purpose to Washington.

73 Int. 77. Had you any friend or relation in the Patent-Office when that application was made?

(Objected to as irrelevant.)

Ans. I did not.

Int. 78. Did you not, upon application at the Patent-Office for the original specifications, find that they were lost?

(Objected to as hearsay.)

Ans. I think they were lost.

Int. 79. How did you supply their place?

(Same objection as above.)

Ans. The man, Mr. Breed, there that I employed in reference to my case had formerly some connection with the Patent-Office—I think was in the office at the time that Isaac Winslow made his first application—and supplied them from some data in the Patent-Office, or from some source to which he had access.

Int. 80. Have you any knowledge of the original sources from which Breed made up the specification?

(Objected to as calling for hearsay evidence.)

Ans. I have not.

Int. 81. Do you know Samuel Rumery?

Ans. I do.

Int. 82. Is he, jointly with you, interested in this patent?

Ans. He is.

Int. 83. Was he at any time associated with Nathan Winslow in packing corn, and in what year?

(Objected to as irrelevant.)

Ans. He worked with him, but was never associated with him; I think in 1849.

Int. 84. In what year was Winslow's hermetically-packed green corn put into the market, with the labels upon the cans?

Ans. I cannot say distinctly. I think not before 1851 or 1852.

Int. 85. Were they so put into the market before the applica-
74 tion for a patent?

(Objected to as irrelevant, not being limited to acts of the inventor, or with his consent and allowance.)

Ans. Not to my knowledge.

Int. 86. What was printed upon the labels on the cans when put into the market?

(Same objection as above.)

Ans. I have no recollection of what was put upon the labels previous to 1853, when I became interested in the business.

Int. 87. What was put on after you became interested?

(Same objection as above.)

Ans. I think substantially the same as is now upon them, with the exception of Nathan Winslow & Co., instead of J. W. Jones. I think there was some change after these patents were issued. After issue of patents think there was some mention of the patents.

Int. 88. Have you at any time instituted legal proceedings against any parties for infringement of the Winslow patent; and if so, when, where, and against whom?

Ans. I have. Against Thompson & Totten, of New York; date not remembered.

Int. 89. Were these proceedings abandoned?

Ans. I withdrew my action.

Int. 90. Are you acquainted with Aaron Ring, of Wiscasset, formerly of Portland?

Ans. I am.

Int. 91. Whether or not Ring was engaged in 1851,-'2, and -'3, in putting up corn?

Ans. I do not recollect. Know of his putting up corn in Portland, but don't know how early.

Int. 92. Do you recollect of his having a conversation with you while in Portland as to your method of putting up corn?

Ans. I have no recollection.

75 Int. 94. Do you recollect of stating to him in substance that you were at work putting up corn and vegetables with Nathan Winslow? That Winslow adhered to the idea of boiling the cans without venting, and it was hard to tell the good from the bad, and that you were tired of it, and wanted to go in with a man who vented the cans as he did or go alone, while Ring was putting up corn in Portland?

(Objected to as immaterial.)

Ans. I very well know I never had any such conversation with him at any time.

Int. 95. When did you first use the method of puncturing the cans and resealing them?

(Objected to because immaterial, since witness is not inventor.)

Ans. In 1852 or '53.

Int. 96. Was the process of venting the cans and resealing ever used by Isaac Winslow to your knowledge?

Ans. It was.

Int. 97. When and where.

Ans. More or less every year that I knew of his packing, and at my father's house and at Congin.

Int. 98. Why, in stating in this deposition the process of packing corn in your answers to int. 20, int. 29, int. 34, of cross-examination, did you omit to state the puncturing and resealing the cans as a part of the process?

Ans. He did not consider it essential to his method, and in puncturing a portion of the aroma of the corn escaped.

Int. 99. What was the size of the cans used from 1842 to 1852?

Ans. They in size would compare with what we call in trade our two-pound cans, but not in weight. They were taller or longer, but not so large round.

Int. 100. How long did you make use of the long cans?

Ans. I think up to 1853 or through it.

76 Int. 101. Can you state about what proportion of your corn was packed in the long cans?

Ans. While they were used none other was used.

Int. 102. State whether or not Isaac Winslow was engaged in business in France; and if so, about what time, and when?

Ans. I knew of his being in business there with his brother. I think it was some time previous to engaging in packing corn. It was in Havre.

Direct resumed:

Int. 1. Did you ever have any record of Isaac Winslow's packing corn in 1842, &c.; and if so, what became of it?

Ans. I had some memoranda, together with the original patent and other papers, in relation to this packing corn, in Edward Fox's office, and they were burned, together with most of the papers in my office, in the fire of 1866.

Int. 2. Have you or not a distinct recollection that Isaac Winslow packed a small quantity of corn by what is now known as the Winslow process at your father's house in Westbrook, in 1842?

Ans. I have.

(The question objected to as leading; that it assumes that the witness knows what is meant by the Winslow process, and asks for an opinion rather than for a fact.)

Int. 3. In your answer to the 12th, 27th, 35th, 36th, and other cross-interrogatories, you do state that a portion of Mr. Isaac Winslow's corn-packing from 1842 to '49 was in each year partially unsuccessful. State in what particular.

Ans. In the mechanical parts, I mean. The cans were very imperfectly made.

Int. 4. Is this your meaning whenever you have used the word unsuccessful?

(Objected to by Mr. Bradbury as leading.)

Ans. It is.

77 Int. 5. Have you examined corn preserved by Isaac Winslow during the years named by you in your direct examination, and if yea, when did you examine and what was its condition?

(Objected to as calling for an opinion of the witness.)

Ans. I very often opened it and examined it, and the corn had kept very nice indeed.

Int. 6. In your answer to the 48th, the 49th, and 50th cross-interrogatories and others, you speak of Nathan Winslow's packing corn; what packing do you mean?

Ans. I mean the same packing referred to in the direct examination. There was only one in the years referred to in the cross-examination.

Int. 7. When green corn is in the milk, how long is it fit for packing?

Ans. Very few days—less than a week.

Int. 8. In your answer to the 68th cross-interrogatory you say that the quantity of corn packed at Congin from 1850 to '52 was larger than that packed in previous years. To which of the years, '50, '51, or '52, if either, did you particularly refer in that answer?

Ans. In '52 the largest quantity was put up.

Int. 9. What, if anything, previous to the filing of the application for letters-patent, have you ever heard Isaac Winslow say about selling any of the corn packed by him?

(Objected to on grounds that statements of Isaac Winslow are not admissible as evidence, being hearsay.)

Ans. I have repeatedly heard him say, during these years, that he did not wish to have any sold.

Int. 10. In your answers to the 78th and 79th interrogatories of cross-examination, do you say that you learned, on going to Washington, that Isaac Winslow's original specification was lost? and, if so, state how it was supplied. From whom did you learn this?

78 Ans. From Daniel Breed, who was then a solicitor of patents in Washington.

Int. 11. In many of the cross-interrogatories the counsel has used the word experiments, in speaking of Isaac Winlow's corn-packing from '42 to '49. Do you, or not, wish to be understood as adopting that word into your replies?

(Objected to as leading in form and immaterial.)

Ans. I have not adopted it in my replies and did not intend to.

Int. 12. In your answer to cross-interrogatory 89 you state that you withdrew an action once commenced upon these patents. Under what instructions, if any, did you do it?

Ans. I withdrew it with the express understanding with my counsel that I could resume it at any time; and he assured me that he would so arrange it.

(Latter part objected to as hearsay, and there is better evidence.)

Int. 13. State why you suspended this action?

Ans. I did not have the means to carry it on or the time to attend to it properly.

Int. 14. State where the corn packed by Isaac Winslow from '42 or thereabonts to '49 was placed?

Ans. The first of it was placed in Nathan Winslow's store, in the attic, on Fore street, and when Mr. Winslow moved, it was moved to Union wharf. A portion of it was in an outbuilding that they used at Congin for packing corn. I have seen some of it there in the attic within a year, I think, and I have seen, in years gone by, that at Congin.

Int. 15. Under whose direction was the corn packed by Isaac Winslow, down to 1849, thus stored away?

Ans. I do not know.

Int. 16. What was Isaac Winslow's disposition?

(Objected to as immaterial.)

79 Ans. He was slow and moderate in his disposition. He was very particular.

Int. 17. While Isaac Winslow was packing corn from '42 to '49 what were his means?

(Objected to as immaterial.)

Ans. His means were very moderate. He had but little money.

Int. 18. Did he receive any pecuniary assistance; and, if so, from whom?

(Same objection as above.)

Ans. Nathan Winslow assisted him.

Int. 19. State whether Isaac Winslow met with discouragements in his packing from 1842 to 1849?

(Objected to as immaterial.)

Ans. All his friends, with the exception of Nathan Winslow, discouraged him, and Nathan Winslow always showed a disposition to help him along in his enterprise.

Int. 30. In answer to the 5th cross-interrogatory you state that Isaac Winslow was established in his principle of packing corn. Please explain your meaning, and state what year of his packing you intend to apply that expression to?

Ans. I intend to appy it to the years from 1842 to 1849, and I mean that he had one method of packing corn during those years, to such an extent that it was known in the trade as Winslow's method.

Cross resumed:

Int. 1. How many cans did you pack in 1852?

Ans. Could not state the amount; a very small amount indeed.

Int. 2. Did you sell the corn you packed that year to Nathan Winslow?

(Objected to as immaterial.)

Ans. I did—about 1,000 cans.

Int. 3. Was this packing done under the direction of Isaac Winslow?

Ans. It was not.

80 Int. 4. Did you make an affidavit to be used in the preliminary examination of this suit?

Ans. I did.

Int. 5. Did you made an affidavit to be used in your own suit against Hodges et al., in Massachusetts?

Ans. I did.

Int. 6. In either of those affidavits did you state substantially as follows: As early as '42 Isaac Winslow wrote my father, Caleb Jones, requesting him to plant a piece of sweet corn to experiment upon. Early in the fall he came there and fitted up a building, formerly a cord-factory, for experiments. First experiment was cutting corn off the cob, putting it into cans and subjecting to heat. First experiments in cooking were made in common wash-boiler, and in a very small way. I assisted him throughout in his experiments. Experiments mostly unsuccessful—that is, the corn spoiled after remaining some time packed. In 1843 experiment failed and steam apparatus abandoned after year's use. 1844, went back to boiling in open boilers, inserting cans in boiling water various lengths of time, and otherwise experimented until successful. Can't say I have particular recollection of his experiments at father's after this until 1846, when Nathan, brother of Isaac, joined him, when packing was done by them both, under Isaac's superintendence?

Ans. I did.

Int. 7. Did you in your affidavit state that Isaac Winslow succeeded in packing his corn without exhausting the air from the cans?

Ans. I did.

Int. 8. In that affidavit did you state that from 1846 to '49 and '50, work was done at Congin under Nathan, under instructions from Isaac,

also experimented in packing corn on the cob, but it was an inferior article?

81 Ans. I did.

Int. 9. Did you or not state in your affidavit, that in 1852 Mr. Winslow, considering his process perfected, applied for a patent, and being otherwise engaged, assigned the business to Nathan and myself, and agreed to give us the benefit of any improvements he might make?

Ans. I did.

Int. 10. Did you know of Nathan Winslow's putting up lobsters by this process—hermetically sealing and cooking—from 1842 to 1849?

Ans. I did not.

Int. 11. Did you know of any parties in Portland or vicinity packing corn by any process, in cans hermetically sealed, and cooking between years '42 and '49?

Ans. I think there was some packed as early as 1849, but not by Winslow's. If I am right as to dates, it was Kemp, Day & Co. I don't know of anybody else at that date.

Direct resumed:

Int. 1. In your answer to the 8th cross-interrogatory you state that Isaac Winslow's experiments were confined to the mechanical parts of his packing corn. State if your use of that word was the same or different in all testimony which you have given in this case?

Ans. It was.

J. W. JONES.

Affidavit of John W. Jones, for complainant, made February 18, 1870.

I, JOHN WINSLOW JONES, of Westbrook, in the county of Cumberland, and the State of Maine, of lawful age, being duly sworn,

82 on oath depose and say as follows: My occupation is a packer of hermetically-sealed goods, and has been for many years. My residence, Westbrook. I have mostly packed corn under the Isaac Winslow process, and now use this altogether. I am one of the plaintiffs in the suit in equity in the circuit court of the United States for Maine, John Winslow Jones and others, in equity, *v.* Henry Clark. This corn has late years attained a very extensive sale and market, and the process is of great value. During the late war great quantities were supplied to the Government, and contracts still are made with them.

Isaac Winslow, the inventor, was my uncle. He is now dead. I was much with him and worked with him in his early experiments, and learned the process from my association with him. My recollection of these experiments is quite distinct, and is as follows: As early as 1842, Isaac Winslow wrote to my father, Caleb Jones, at Westbrook, requesting him to plant a piece of sweet corn for him to experiment upon. Isaac Winslow came to Westbrook early in the fall, and fitted up a building formerly used as a cord-factory for his experiments. His first experiment was by cutting the corn off the cob in a raw state, putting it into cans, and then subjecting it to heat. The first experiments in cooking were made in a common wash-boiler, and in a very small way. I was employed with him throughout all his experiments, assisting him in various ways about his corn. In boiling he could boil only a few cans at a time, and there were scarcely two lots served in the same way. Little lots were piled up over the building, marked to correspond with a little memorandum-book in which he kept a record

of his experiments. The experiments were mostly unsuccessful; that is, the corn spoiled after remaining some time packed, but there was enough to give Mr. Winslow confidence in his ultimate success. What was preserved was of a very superior quality. I remember that
83 some friends of Mr. Winslow, to whom he sent some cans of the corn, in Boston and Philadelphia, complimented it very highly. In 1843, Mr. Winslow prepared for more extended trials of his invention. He fitted up a small steam copper boiler that would hold a little more than two barrels of water, and capable of carrying about 10 or 15 pounds of steam. To this he attached large wooden tanks l zinc or lead and made steam-tight. After cutting off the corn and placing it in cans as before, he subjected it to direct action of steam in these tanks without water. This did not prove a success, and the whole steam apparatus was abandoned after using it one year.

The next season he went back to the process of boiling in open boilers, inserting the cans in boiling water and boiling different lengths of time, and otherwise experimenting till he was comparatively successful. This extended over some years. I cannot say that I have a particular recollection of his experiments at my father's house after this till the year 1846, when Nathan Winslow, the brother of Isaac, joined him, and the packing was done then by them, both under Isaac's superintendence. At this time the object was to reduce the packing to a certainty, the difficulty being that so much of the packed article spoiled that it showed there was some defect in the process, and that it could not be safely shipped for a market or for sale. This year, 1846, my father, Caleb Jones, raised a little corn and Horace Emery hauled some for this purpose. I assisted this year. The idea was to preserve the corn by putting it into the cans raw, fresh from the cob. In 1848–9 corn was sent to some different places. Mr. Isaac Winslow had put his corn into the hands of his friends at different times, and it was known as a superior article. From 1846 to '49, and even '50, the work was done at Congin under Nathan Winslow, under instruction from Isaac. I was frequently there when the corn was being packed. Isaac Winslow also made
84 some experiments in packing corn on the cob, but it was a very inferior article. Mr. Winslow succeeded in packing his corn without exhausting the air from the cans, and was, I think, the first one to do so. I have been acquainted with the business since '42, and myself engaged in it since 1853. When cans were boiled without venting, the ends were bulged out, and from the fact that with other canned articles this bulging was a sign that the contents were destroyed or spoiled, and the venting was used to prevent that appearance to the cans. But preserved green corn can just as well be sound with cans bulged as not.

Mr. Winslow was always very sanguine that he should produce a new article of immense value, and I have never heard it stated otherwise by parties in any way engaged in the business or having any connection with it, than that Isaac Winslow was the inventor of the process of preserving green corn. In 1852 I packed about eleven hundred cans myself, and sold in the fall to Nathan Winslow, and in 1853 I went into partnership with him under a contract hereto attached, marked A, made in 1856.

In 1852, Mr. Winslow, considering that his process was fully perfected, made his application for a patent, and being otherwise employed and engaged, assigned the business over to Nathan and myself, with the stipulation that he was to give us the benefit of any improvement he might make and of his knowledge of the process he had invented. As late as '53 or '54 corn was little or never known in the market, except

the Winslow corn, as far as I have ever learned, and I have long been in the business. After we went into partnership, we had great difficulty in disposing of the corn we packed, for want of a market. Nathan Winslow had to pay for about everything he bought in his canned corn, such as clothes, groceries; and he often impressed upon me the
85 importance of doing the same thing. As late as '55 or '56 he would return from journeys to sell corn with a variety of articles he had purchased by the corn.

Mr. Rumery assisted N. Winslow, I think, in '49. In 1850, I think, he went into partnership with him in packing fish and meats, but no corn. Corn was packed in small quantities, but Rumery had no interest in that. The partnership continued less than a year. In '51 or '52 Rumery went into business for himself, and packed about one year. Rumery and Burnham packed corn a little, I think, nearly every year after 1853; and I think Darius Lowell, who lives near my father's house, furnished the corn they packed for the market. The first attempt I ever heard of being made to pack corn by putting into the cans in a raw state, was by Kemp, Day & Co., who came from N. York and established a packing-house in Portland. Samuel Raymond made a contract to furnish them all the corn they wanted. Before the corn was delivered, Mr. Raymond had notice to stop delivering any more. At this time the corn of Kemp and Day was spoiling very badly. They sold out to Rumery and Burnham very soon after. Rumery and Burnham packed by boiling on the cob and removing the kernels afterwards, adding a little water, and then further cooking in the can. I think, from my knowledge and recollection, that Rumery and Burnham were the first to pack by the Winslow process successfully, of all outside parties.

In about 1859 or '60 Thompson and Totten's corn began to appear in the market, packed by them in New York. This was the first that ever came into competition with the Winslow corn. This was white corn, cooked in sugar and water, placed in the can, the corn in a raw state, with sugar and water added. I took proceedings in New York against this as an infringement of the Winslow patents, but the case was finally left to be continued at any time I saw fit to resume it.

86 I am aware of various parties since '52 who have attempted to pack corn, some by the Winslow process, and some by other processes; but none has ever competed in the market with the Winslow corn. The name is well known by persons in the trade, and it has an extensive and valuable reputation in the market.

Prior to '51 or '52, the lots of corn packed were quite small, and were for the purpose of testing the process as a means of preserving corn. I know of its being given to many of Mr. Winslow's friends for their opinion, and to give it a name, and to spread the knowledge of it. Much of the product of these years was spoiled from various causes. The products of two or three years' packing, prior to '52, was stored in a building on Union wharf, Portland, and remained there for many years, till a recent date, and I think some may be found there now. Of this, some was sent and given away, but the method was not sufficiently sure to warrant making the corn a marketable article at those times. The power of preserving it for a length of time was the great question. For this, time was necessary to see if the preserved article would remain sound. Several years are necessary for such an experiment, and a considerable amount of the goods; no judgment would be safe based upon the result of a few cans. Only a few weeks of each year can be employed to put up the corn when it is in the proper stage of growth, and a succession of years are therefore necessary to try an experiment

of this importance with any sureness. Different seasons of corn seem to be different in the character of the green corn, and more than one temperature or climate can only show if the goods will keep.

Corn packed according to the Winslow process, when properly packed, will, I think, be safely preserved for a long term of years. Mr. Winslow's process, in removing the corn from the cob, cut the
87 kernel in two, and he some time about '50 or '51 and afterwards, instead of cutting the corn in two, so as to leave a part of the kernel on the cob, and then scrape the cob, used sometimes to cut a slit down through the kernels from their tops, and then scrape the kernels, removing the interior and leaving the hull on the cob. This would keep, but was not, I believe, so well adapted to the business as the other mode.

In 1853–'4 the corn cans had on them the words Winslow's Improved Patented Green Corn. I was the assignee in full of all Isaac Winslow's patents for preserving green corn, and they were issued to me as assignee. I have, at different times, granted licenses to Plummer & Marr, Davis, Baxter & Co., and Rumery & Burnham, and later to E. Huff, of North Edgecomb. In 1868 I assigned interests in the patents to Davis, Baxter & Co. and Samuel Rumery.

In making contracts with the Government for the sale of corn packed, the goods are subjected to reclamations within two years. If goods sold them spoil within two years after delivery we have to make them good. Either in '53 or '54, Day, of the firm of Kemp, Day & Co., was on and to my factory making inquiries about the business. He looked over the factory and made very minute inquiries.

J. W. JONES.

Deposition of Samuel Rumery for complainant, taken May 9, 1871.

I, SAMUEL RUMERY, of Portland, County of Cumberland and State of Maine, being duly sworn, depose and say as follows:

Int. 1. Please state your name, age, residence and occupation.

88 Ans. Samuel Rumery; forty-five; Portland; preserver of hermetically-sealed goods.

Int. 2. Are you one of the plaintiffs in suit now pending in the circuit court in Maine district, entitled John W. Jones, in equity, v. Henry Clark?

Ans. I am.

Int. 3. When did you first become connected with or engage in the business of hermetically-preserving corn, and where; with whom?

Ans. About the year 1843, in Eastport, with Treat, Noble & Co.

Int. 4. How was the corn then preserved, and how long did you remain with them or at that place?

Ans. The corn was cut from the cob, cooked in kettles, then filled into cans with the liquor in which it was cooked. I was there two years at that time. I was only employed there those two years; was back in 1846 on a visit. I left in the fall of 1845.

Int. 5. Where were you next, if at all, connected with preserving corn? Give an account of the same.

Ans. In Portland, with W. K. Lewis & Co., in 1846–'47. The next was with Nathan Winslow, in Westbrook.

Int. 6. When and where did you first hear of the process of cutting the kernels of corn from the cob, putting them into cans raw, sealing and cooking the corn in its own liquor, and where did you first practically learn the same, and from whom?

Ans. I first heard of it in Eastport, by means of a man by the name of Baker, who was at work with me, and who had a brother in Portland. We had heard in Eastport of a man who was putting up corn in Portland by a new process. I first learned it practically in 1848, I think, in Westbrook, from Nathan Winslow. I had seen a sample of the corn packed in that way in 1845 when I came to Portland. It was shown to me by Nathan Winslow.

89 Int. 7. What was the chief business of the firm with whom you were employed in Eastport; what proportion of that business was corn-packing, and when did they discontinue the business?

Ans. The chief business was lobster-packing. Two or three rice casks of corn per season, as samples; it was very small. There was no business to speak of in corn there; no market; and the whole business was discontinued in 1846—the fall of that year.

Int. 8. Did you, while there, know Jeremiah Ford and Charles Mitchell; and what was their duty in the manufactory?

Ans. I knew them both while there. Ford's duty was to prepare the articles for the cans and put them in, and Mitchell's was sealing up and bathing.

Int. 9. Name the places where you have been connected with corn-packing, and the dates.

Ans. Eastport, 1843-1844; Portland, 1846-1847; Westbrook, in 1848; New York, in 1849. In New York, with Wells, Miller & Provost. In these places, the process was either to boil the corn on the cob and then cut it off, or to cut the kernels off the cob and then boil them before packing. No other process was used. I never saw any packed by the Winslow process till I worked for Nathan.

Int. 10. Did you give a deposition in a suit upon the Winslow patents, John W. Jones v. Thompson & al., in New York, and an affidavit in the suit, John W. Jones v. Hodges, in Massachusetts, and will you annex the same to this deposition?

Ans. Yes. [It is agreed that the deposition and affidavit subject to any objections that may be made at this hearing, shall be hereto annexed, marked A and B.]

90 Cross-examined by A. A. Strout, attorney for defendant:

Was not the process practiced at Eastport, the same process you practiced when you were with Nathan Winslow?

Ans. It was not.

Int. 2. State in what it differed.

Ans. In Eastport, the corn was cooked before it was put into the cans. With Winslow, it was put into the cans raw.

Int. 3. Did that make any difference in the manufactured article?

Ans. It did. Winslow's was much the best.

Int. 4. You state that you put up corn with Nathan Winslow in 1848. Will you state whether or not at that time Mr. Nathan Winslow had fully completed his process of putting up green corn? (Objected to as irrelevant.)

Ans. His system was not perfected, because we lost more than half of it before it went out of the shop.

Int. 5. From whom did you first learn the process of preserving green corn by cutting the corn from the cob in its milky state, placing the same in hermetically-sealed cans, cooking the corn so sealed in a bath of hot water, puncturing and resealing during bathing, and rebathing after puncturing, as stated in the Winslow patent?

Ans. The first corn I ever saw packed in that way, was while in the employment of Nathan Winslow.

Int. 6. Will you testify that this was not the process used while you were in the employment of Wells, Miller & Provost?

Ans. I will. All corn put up while I was there, was cooked before it was put into the cans.

Int. 7. Have you not an interest in the event of this suit?

Ans. I have.

SAMUEL RUMERY.

91 A.

United States circuit court, southern district of New York.

JOHN W. JONES, COMPLAINANT,
against
BENJAMIN THOMPSON, WILLIAM H. B. TOTTEN, respondents. } In equity.

A witness on the part of the respondents, being duly sworn and examined, deposes and says as follows, in answer to the following interrogatories:

Int. 1. What is your age, residence, and occupation?

Ans. My age is 38 years; residence, Portland, Maine; occupation, preserver of meats, fish, vegetables, &c.

Int. 2. Have you or not any knowledge of the subject of preserving Indian corn and other vegetables?

Ans. I have.

Int. 3. Have you or not any knowledge of the grant of certain letters-patent of the United States to John W. Jones, the complainant in this action, assignee of Isaac Winslow, of Philadelphia, dated the 8th April, 1862; also, of certain other letters-patent, granted to the said complainant, Jones, assignee of the said Winslow, and dated the 13th day of May, 1862; also, of certain other letters-patent, granted to the said complainant, Jones, assignee of the said Winslow, and dated the 20th day of May, 1862; and, also, of certain other letters-patent, granted to the said complainant, Jones, assignee of the said Winslow, dated the 21st day of August, 1862? And if you answer in the affirmative please state whether you have read and examined the specifications and claims of each of the said several letters-patent.

Ans. I have seen certified copies of them, and have examined all of them separately.

Int. 4. What do you understand to be the invention claimed in the patent granted 8th April, 1862?

92 Ans. I understand the invention claimed, to be preserved Indian corn, a new article of manufacture.

Int. 5. What do you understand to be the invention claimed in the patent granted the 13th day of May, 1862?

Ans. I understand the invention claimed to be removing the corn from the cob and hermetically sealing the same in tin cans.

Int. 6. What do you understand to be the invention claimed in the patent granted the 20th May, 1862?

Ans. I understand the invention claimed is the filling of the cans with raw corn, and then tightly soldering the same, and exposing them to heat four hours.

Int. 7. What do you understand to be the invention claimed in the patent granted August 26, 1862?

Ans. I understand the invention claimed to be the puncturing or venting the cans to prevent their bursting when first exposed to heat.

Int. 8. What do you understand to be an article of manufacture?

Ans. An article made from another article.

Int. 9. Is or is not a potato cooked an article of manufacture?

Ans. No, not in my opinion.

Int. 10. Does or not the simple fact of boiling a potato manufacture a potato?

A. It does not; it only cooks a potato.

Int. 11. In what respects does boiling a potato to change it into an article of food for human beings, differ from boiling corn to change it into an article of food for human beings?

Ans. The result is the same.

Int. 12. Has or has not boiled unripe corn been long known?

Ans. It has.

Int. 13. Does or not cooking corn or other vegetables or meats
93 convert them into manufactures, or are they only modified in taste and flavor according to the degree of cooking they have been subjected to, but not in substance?

Ans. Simply cooking them does not convert them into manufactures, it only changes their flavor. Whether they are cooked a longer or shorter time, their substance is the same.

Int. 14. Is or not Indian corn the same in substance when cooked for a short time, as when it is cooked for a longer period of time?

Ans. It is.

Int. 15. Is or not the effect of cooking green corn, as described in the patent of 20th of May, 1862, to coagulate the milk to prevent putrefaction, the same in effect as cooking an egg to coagulate its albumen? And if you answer in the affirmative, is such cooked or boiled egg a new article of manufacture?

Ans. The effect is the same. A boiled egg is not a manufactured egg.

Int. 16. Is or not the alleged invention of a new article of manufacture claimed in the patent of 8th of April, 1862, a well-known production of nature, long been in use as an article of food, cooked by boiling on the cob, and when removed from the cob?

Ans. It is, and has been long known as an article of food cooked by boiling, both on and off of the cob.

Int. 17. Is or not the invention or discovery described in the patent of 8th of April, 1862, for a new process to obtain a new result?

Ans. The process and the result are both old to me.

Int. 18. What do you understand to be the process for preserving green corn, described and patented in the patent of 13th May, 1862? And please give an analysis of the same.

94 Ans. I understand the process to be 1st, cutting the corn from the cob; 2d, filling it in tin cans and boiling the same four hours, sometimes puncturing and sometimes not.

Int. 19. When and where did you first know of the kernels of green corn being removed from the cob for cooking and preserving in a green state?

Ans. I have practiced it in Portland, Maine, about every year since 1846, and knew of its being done in Eastport, Maine, some years before that.

Int. 20. When and where did you first know of packing green corn removed from the cob, in tin cans, for cooking and preserving the corn in a green state?

Ans. In Eastport, Maine, 1843 and 1844; heat not more than 15 or 20 degrees.

Int. 21. When and where did you first know of the kernels of green corn being packed in tin cans and hermetically sealed, for cooking and preserving the corn in the green state?

Ans. I practiced it myself in Westbrook, Maine, in that way in 1848, and I knew of it some years before.

Int. 22. When and where did you first know of the practice of puncturing the hermetically-sealed tin cans packed with the kernels of green corn for preservation, after being subjected to heat a short time?

Ans. I first knew of its being done in Eastport, Maine, in 1843, while in the employ of Messrs. Treat, Noble & Co.

Int. 23. When and where did you first know of the practice of resealing the punctured tin cans before the cooking and boiling of the corn was finished?

Ans. I have known of it ever since I first had a knowledge of the preserving business.

Int. 24. When and where did you first know of the practice of cooking green corn hermetically sealed in tin cans for the space of about four hours?

95 Ans. I have put up green corn in Portland, Maine, about every year since 1845, and have always practiced cooking it longer than four hours.

Int. 25. Is or not the process described in the said patent of 13th May, 1862, old and well known to yourself and the public?

Ans. It is.

Int. 26. Is or not the entire process described in the said patent of 13th May, 1862, the same in every essential particular as the process for preserving green peas, fruit, &c., and has been practiced by the public in New York and elsewhere at least ten years prior to the date of the said patent?

Ans. The process is the same; meats, fish, vegetables, fruits, &c., are all put up by the same process, but differ in the time of cooking.

Int. 27. What do you understand to be the invention described and claimed in the patent of 20th May, 1862?

Ans. I understand the invention claimed is the filling of the cans with raw corn and then tightly soldering the same and exposing them to heat four hours.

Int. 28. Was or not the alleged improved process for sealing unripe corn, after its removal from the cob, in air-tight cans, known and practiced by you as long ago as 1855?

Ans. This process has been practiced by me every year since 1848, and was known to me some years before.

Int. 29. Was or not the alleged improved process for sealing unripe corn, after its removal from the cob, in air-tight cans, and heating the same to coagulate the milk in the cans or cook the corn, known and practiced by you as long ago as 1855?

Ans. It has been practiced by me since 1848, and was known to me some years before.

Int. 30. Is or not the process for preserving green corn described in the said patent of 20th May, 1862, also described in the patent of 13th May, 1862, and 8th April, 1862?

96 Ans. The same process is described in each.

Int. 31. What do you understand to be the invention claimed in the patent of 26th August, 1862?

Ans. I understand the invention claimed to be the puncturing or venting the cans, to prevent their bursting when first exposed to heat.

Int. 32. When and where did you first know of the practice of puncturing hermetically-sealed tin cans after being heated a short time, in the process of cooking green corn, to let the air contained in the cans escape?

Ans. I have practiced since 1846 in Portland, Maine, and I knew of it some years before, while in the employ of Messrs. Treat, Noble & Co., Eastport, Maine.

Int. 33. Is or not the practice of puncturing cans, a short time after being heated, in the process of preserving corn in a green state, common and well known to the public, and has been used as long ago as 1855?

Ans. It has been well known and practiced by me in Portland, Maine, since 1846.

Int. 34. Is it or not of material importance whether the tin cans be punctured at one or another period of time, intermediate of the time subjected to heat to cook the corn, so long as they be punctured before the heat is suspended to expel the air, and thus prevent the bulged appearance of cans?

Ans. I think the time of puncturing is of some importance as to the corn being well preserved to stand the test of a warm climate. I have always practiced boiling it more than one hour before puncturing or venting.

Int. 35. Does or not the said J. W. Jones, assignee of the said Winslow patent of 20th May, 1862, claim that puncturing the tin cans to let the air contained in them escape is in the process of cooking or preserving the corn?

Ans. I understand that he, the said J. W. Jones, claims that the puncturing or venting of the cans is not necessary for preserving the corn.

97 B.

Circuit court United States, Massachusetts district.

JOHN W. JONES et als.—in equity. Term, 1870.

I, SAMUEL RUMERY, of Portland, in county of Cumberland, and State of Maine, being duly sworn, on oath depose and say as follows:

My age is 44; my occupation that of a preserver of meats, fruits, and vegetables, and has been such since I was 19 years of age. My first connection with the subject of the preservation of green corn was with Treat, Noble & Co., at Eastport, in this State, in the years 1844 and 1845. The corn was put up by them to the amount of eight or ten dozen cans a year during these years, by cutting it from the cob, cooking it in a liquid, and then putting it up in cans, bathing it in the usual way. The corn thus put up by them was not in the milky state, but was quite hard. Preserving lobsters and fish was their principal business. My next connection was with Lewis & Co., of Portland, during 1846 and 1847. I was interested in this manufacture. A very small quantity only was packed for the two years. This was prepared by cooking the corn on the cob, cutting or prying the kernels off whole, putting into cans with water, and bathing in the ordinary way. This corn was not in the milky state.

In 1848 I know that Nathan Winslow, who was Isaac Winslow's brother, and claimed to be working under him, put up some corn in Westbrook. The process was cutting the corn from the cob with a

curved gauged knife, scraping the chit and juices remaining on the cob. The corn and the juices were then filled into the cans raw, without any liquor being added, and the cans were then sealed and bathed
98 by a new process. Mr. Nathan Winslow was accustomed to say that the process he used in putting up corn he had learned from his brother Isaac. I never knew of his selling in the market any of the corn which he thus packed. He was a Quaker. He sent some of the corn to his brother Isaac. He was a stove-dealer previous to his packing this corn. The quantity packed was small.

I think it was in 1849 that I went into partnership with Mr. Winslow in the packing business, which did not embrace the packing of corn, nor was that considered part of the business. I only continued one season, until we were burned out the next winter. The first that I learned of the method of packing corn used by N. Winslow, and invented by Isaac Winslow, was while at work for and with Nathan Winslow. Before that I had never heard or known of the method. My next connection with packing vegetables was in New York, with Wells, Miller & Provost. I was employed by them one season; I think the year 1850. Their business, as far as corn was concerned, was putting up succotash, mixing corn with beans, boiling and canning the same, the articles being put in the cans mixed with the liquor with which they were boiled. They were pickle manufacturers, and had no knowledge of canning any vegetables in any way until I went there.

I was next connected with the packing of corn at Portland, in connection with George Burnham, jr., and by ourselves and at Westbrook, under Nathan Winslow. The process employed by Burnham and myself was to boil the corn on the cob, removing the corn therefrom afterwards, and filling the cans up with salt and water. The packing I did at Westbrook at the same time as above, under the direction of Nathan Winslow, was in accordance with the method patented by Isaac Winslow. Mr. Burnham and I continued together for about 15 years. I
99 think about 1863 we changed our process and adopted the Winslow one, and packed in that way one season in Portland, in which we were not successful. We then moved to Saccarappa, Westbrook, and continued there three years, practicing the Isaac Winslow process of packing corn. We had no license for the use of this process at that time. After several interviews with J. W. Jones, the assignee of Isaac Winslow, who notified us that we were intruding upon his rights, we compromised the matter and took a license from Mr. Jones, under which we subsequently operated.

From my earliest acquaintance with hermetically packing vegetables, I never knew or heard of the process patented by Isaac Winslow until my association with Nathan Winslow, as before recited; and I never have been associated with any persons packing corn who used or knew of the Winslow process, except those who had learned or heard of the process from the Winslows. It was known at Eastport by me when I was with Treat, Noble & Co. that there was a man at Portland packing corn and who had packed; and when I came to Portland in 1845 I hunted him up, and found that it was Nathan Winslow; and he then showed me some corn in cans which he had packed. He was then in a small room up stairs, on the corner of Green and Congress streets. According to my recollection the Winslow corn became an article in the market about 1853. The Winslow corn—that is, corn packed by the Winslow process, patented by Isaac Winslow—is a different article from any other that I knew. The Winslow process permits of the corn being preserved in a milky state and all its juices saved, so that all the liquor

used in the cans is the juice of the corn itself. Practically it is not possible to produce an article of the same grade and quality by either boiling the same on the cob, or removing it therefrom and boiling the same before it is placed in the cans.

100 Since the time that Burnham and I adopted the Winslow process I have never used any other, and I am engaged in the business at the present time.

I have been connected with the business of preserving vegetables, and have been acquainted, to more or less extent, with parties in this country connected with it, since 1845.

From my general knowledge of this business and parties connected with it, I am very sure that no green corn was packed in the United States outside of the State of Maine prior to 1852. If such had been the case, I could not have failed to know it, and I have never met with any packers that knew of any such fact.

From my knowledge of the facts connected with increase of this branch of the packing business since 1845, or perhaps a year or two later, I am satisfied that it is owing to the Isaac Winslow process, and that his method has been communicated to other parties by workmen who learned the process from Isaac Winslow while in his employment. I know such to have been the fact in many instances.

As I have before stated, in 1848 or 1849 I went into business with Nathan Winslow for the purpose of packing meats and fish, Nathan and Isaac Winslow at that time being engaged in their experiments on green corn. I saw, in the fall of 1848 and '49, on Union wharf in Portland, piled up in a building, quite a quantity of cans of corn, which had been packed by Isaac and Nathan Winslow, and had been there some years. I saw as much corn there as was packed by Nathan for the three years I was with him. I remained there for the next four or five years. This I understand was the corn put up by Isaac and Nathan Winslow. It remained there as late as 1854 or '55, and then I do not know what became of it. One of the reasons for my not entering the partnership was that there was no market for this corn which I saw, and I knew

101 that such an article was not known to dealers; consequently I did not wish to engage in the business.

I remember of some experiments in '48–'49 by cutting open the kernels from the top and scraping out the contents, leaving the hull on the cob. This Isaac Winslow thought would be a useful article for making puddings, &c. The method of packing this was just the same as when the kernels were cut in two. As far as down through the year 1850, no packing-boxes were made for packing up the cans.

I saw the corn on Union wharf a great many times with a Mr. Whittier, and, from my knowledge of the matter, I think this was the greater part of the corn put up by Isaac and Nathan Winslow during different years. I am aware that Isaac sent considerable quantities to his friends, as presents, for their opinions thereon, and he may have sent small quantities to other parties to obtain their opinions upon its salability as an article of trade.

In 1855, I think, Kemp, Day & Co. were the only parties attempting to pack corn by the Winslow method. During that year Mr. Day came to see me, and wanted to sell his establishment to us. It was situated near the foot of the canal, in Portland. He put up other canned goods besides. We finally concluded a purchase, and took possession. At the close of the season of 1856 we moved the building, which was placed over a hollow in the ground, and found the whole space under the building filled with cans of spoiled corn. There were certainly from 8,000

to 10,000 cans. After the trade was made he told me of their loss, and stated the amount as $10,000 in the business. The cans we found contained corn. It was placed there by the workmen without the knowledge of Kemp & Day, who were not here much of the time.

Then personally appeared the above-named Samuel Rumery,
102 at on the day of A. D. 1870,
and made oath to the above affidavit by him subscribed in my presence.

Affidavit of Samuel Rumery.

I, SAMUEL RUMERY, of Portland, in the county of Cumberland, and State of Maine, being duly sworn, on oath depose and say as follows:

I am one of the plaintiffs in the suit J. W. Jones et als., in equity, *v.* , and am an assignee under the patents granted Isaac Winslow for improvements in the process of packing green corn, by assignment from John Winslow Jones. In about the month of February, 1870, Mr. George Burnham, jr., of Portland, came into my counting-room in Portland, and inquired what about the patent-suit on Jones' corn patents. I told him I believed Jones was going to try that old patent of his, and Burnham said, "I know he is, for I have been down to Wiscasset to see Sewall." Thereupon some third person came into the counting-room, and the subject of conversation was changed, and presently Mr. Burnham went away.

In the latter part of March, Mr. Burnham had a conversation with John D. Oates, one of our employees, asking him when and how we had packed corn, telling him, in effect, that he had observed that his, Oates', testimony was not on file in the court with the rest of Jones' testimony. Oates told him what he knew, and Burnham told him he should like to have his testimony. Oates objected, and said he should rather not testify, as he was employed by us. Burnham told him that would make no
difference, as he should summon him. Burnham told Oates that
103 Jones had sued a man down East, but that certain parties in New York had taken hold of the suit to fight it, and that he, Burnham, was acting with them.

To the best of my recollection, without consulting any records, George Burnham, jr., and I went into partnership in 1851, and, to the best of my recollection, we began to use the Winslow process of packing corn in 1853 or 1854. We had no license then. From that time we about every year sold more or less to Kemp, Day & Co., of New York. In 1854 or '55 Kemp, Day & Co. had a packing-house of their own in Portland, and used Winslow's process. At the end of a year, they being unsuccessful here, they sold out to us their interest here.

Since the dissolution of partnership between George Burnham, jr., and myself, Burham has packed quantities of corn under the Winslow process, and sold the same to Kemp, Day & Co. every year. He did so last year.

Some years after we—George Burnham, jr., and myself—formed our partnership, we took a license from J. W. Jones for packing corn, which license was limited to the continuance of our partnership, and expired therewith. I am quite confident that Burnham and I were the first to use the Winslow process without license; then Kemp, Day & Co., as before stated; then Plummer & Marr and J. B. Webb. Plummer & Marr, however, settled up and paid for the privilege. I think Webb did not.

I think George F. Lewis also packed some here, in about 1856; but little, however. I think in the last years of his packing corn he used the Winslow patent. Since that time he has purchased from John W. Jones.

104 *Deposition of William H. Sawyer, for complainant, taken February* 28, 1871.

I, WILLIAM H. SAWYER, of Portland, in the county of Cumberland and State of Maine, being duly sworn, depose and say on oath as follow,

Int. 1. Please state your name, age, residence, and occupation.

Ans. William H. Sawyer; aged 54; Portland; tin-plate and sheet-iron worker.

Int. 2. Were you formerly acquainted with Isaac Winslow?

Ans. I do not think I was acquainted with him before 1842.

Int. 3. State when and where you first knew him.

Ans. When I went to work for him at Caleb Jones's, in Westbrook, in 1842, as well as I can recollect.

Int. 4. State what he was doing when you went to work for him.

Ans. He was putting up green corn, and I sealed the cans for him.

Int. 5. Describe how the corn was packed.

Ans. First we cut it off the cob; scraped the cob to get the milk. It was then put up in the cans, and I sealed it. They were then bathed The cans were then tapped, and the tap or little hole was soldered up again.

Int. 6. State if you can remember how many cans were packed that year.

Ans. I should think one hundred cans. There could not have been more than one hundred and fifty. I should think one hundred.

Int. 7. Did you work with Mr. Winslow in 1843?

Ans. Yes; we put up a few cases; about as many as in 1842.

Int. 8. Did you have anything to do with putting up corn with the Winslows in 1844 or 1845?

105 Ans. I went to Cumberland Mills in 1844 and '5. It was then called Congin. I then worked for Nathan. Isaac was there occasionally. I supposed Nathan was carrying on the business under Isaac's direction. Isaac hired me and paid me. Isaac was there and had conversations with Nathan, and then went away.

Int. 9. State whether Isaac ever gave you any of the packed corn.

Ans. Yes, sir.

Int. 10. State the circumstances of his giving it to you.

Ans. He gave me the corn to eat, saying he did not intend to sell any, but he would give me some to eat. Some of the corn was good, and some was not. (Conversations with Winslow objected to as hearsay.)

Int. 11. State if you remember how much was packed at Congin in 1844 and 1845.

Ans. I do not think it would overrun one hundred and fifty cans.

Cross-examined by Mr. Bradbury:

Int. 1. Have your any memorandum by which you can fix the first year in which you worked for Isaac Winslow?

Ans. I have not.

Int. 2. Are you able to state with certainty that the first year was 1842?

Ans. I went to the coast of Labrador in the fall of 1843, and the fall before and the fall after I worked for the Winslows.

Int. 3. Who, besides yourself, worked for Winslow while you were employed by him?

Ans. No one, that I know of. All I did was to seal the cans; some one husked the corn, but I do not know who it was.

Int. 4. Did Winslow give you corn more than once?

106 Ans. I should judge he gave me some every year I worked for him.

Int. 5. Have you at any other time been engaged in packing corn?

Ans. At no other time until the year after the great fire in Portland. I then worked for John Winslow Jones.

Int. 6. Was any other process of packing used by Winslow other than that stated above?

Ans. None that I know of.

Direct resumed:

Int. 1. State whether Mr. Isaac Winslow, while you were at work with him, stated to you that he was intending to apply for a patent.

(Objected to by Mr. Bradbury as calling for hearsay testimony, and calling for an intention instead of a fact.)

Ans. When we used to be together he used to tell me that he was going to apply for a patent. This he would say frequently when we were together. He wanted me to get up some quicker way of making the cans and to save solder.

WILLIAM H. SAWYER.

Deposition of Andrew Mulnix, for complainant, taken Feb. 28, 1871.

I, ANDREW MULNIX, of lawful age, being duly sworn, on oath depose and say as follows:

Int. 1. Please state your name, age, residence, and occupation.

Ans. Andrew Mulnix; aged 53; Portland; tin-plate and sheet-iron worker.

Int. 2. Where were you at work in 1838?

107 Ans. I was at work for Nathan Winslow and Tolman. Their store was at the junction of Federal, Middle, and Congress streets.

Int. 3. Did you know Isaac Winslow? and when, if ever, did you first have anything to do with him?

Ans. I knew Isaac Winslow, and I first had anything to do with him in 1839, 1840, or 1841—one of these years, I do not know which.

Int. 4. Please state where you thus had anything to do with him, and what it was.

Ans. Some time in one of the three years of '39, '40, or '41 Mr. Isaac Winslow employed me to fix some works for steaming green corn. The first thing I did was to make a tight-fitting cover to a boiler. To that cover I attached a steam-pipe to connect with a large wooden box lined with zinc. In that box was fixed what we call a man-hole door, with a steam-tight cover or door. This was in an old shop attached to the property, or near the house of Caleb Jones, in Westbrook.

Int. 5. State what you saw the zinc-lined box used for, if for anything.

Int. 5. We used the box for steaming or cooking green corn. One way was to boil the corn on the cob and then cut it off, put it in the cans, and seal it; then put in the box and steam it for a short time. Another way was to cut the corn from the cob raw, as it came from the field, cook it in this kettle, put it in the cans and seal it, place it in the box and steam it. The other mode was to cut the green corn from the ear;

place it in the cans raw and seal it; then put it in the steam bath until it was cooked. The way we told that the corn was cooked was to wait till we heard the report of the cans bursting. We then opened the man-hole and removed the cans.

Int. 7. Please state by which of these three methods, if either, the larger portion of the corn was cooked.

108 Ans. I should say by the last process, cutting the corn from the cob raw, putting it into the cans, sealing it, and bathing it.

Int. 8. How long were you out there?

Ans. To the best of my knowledge, I was there five days. One of those days was Sunday.

Int. 9. State how and by what kind of instrument the corn was removed from the cob.

Ans. By a knife which I made by Mr. Winslow's direction; a gauged knife for cutting the corn close to the ear.

Int. 10. State what, if anything, was done with the cob after the cutting with the gauged knife.

Ans. The cob was scraped. Mr. Winslow told me it was very important it should be, as he wanted to save what I think he called the pith.

Int. 11. State what, if anything, was done with the cans to prevent bursting.

Ans. Nothing could be done. But when we opened the man-hole, that let out the steam, and that relieved the pressure. The cans were pricked after bathing.

Int. 12. How many cans would this trough hold?

Ans. I should say at the most 50; perhaps not more than 30 or 40.

Int. 13. Was any one with you and Isaac Winslow?

Ans. No, there was not while we were packing the corn. Mr. Winslow considered it a secret and told me so.

(What Mr. Winslow told defendant objected to as hearsay.)

Cross-examined by Mr. Bradbury:

Int. 1. What was the business of Nathan Winslow and Tolman?

Ans. Their business was to sell stoves of different patterns and tin and sheet-iron work of all kinds.

Int. 2. How long did you continue in their employment?

109 Ans. I commenced with them in December, I think, of 1837, and have been connected with the house or store ever since, except about one year and a half. I was there all the time that Mr. Winslow was in the business. Mr. Winslow left the business somewhere from 1842 to 1846, to the best of my knowledge.

Int. 3. Were you at any time, other than the five days mentioned in your answer to Int. 8 of the direct examination, at work assisting Mr. Winslow in putting up corn?

Ans. No, sir.

Int. 4. How many cans were put up while you were employed by Mr. Winslow during those five days?

Ans. To the best of my recollection, one hundred and fifty.

Int. 5. How many were put up in each way?

Ans. I cannot state.

Int. 6. Have you any memorandum fixing the date of your employment by Isaac Winslow?

Ans. Winslow and Tolman's books would show it, as my time was therein charged to Mr. Winslow. I have no memorandum of my own. At that time I lived in a house that I purchased of Addison Libby, on Neal street. I sold the house within three years of the time at which I pur-

chased it. It was during a portion of these three years that I owned the house that I worked for Isaac Winslow, but I cannot say what portion.

Int. 7. What was the process of pricking cans to which you allude?

Ans. To take a sharp instrument called a scribe, prick the holes, and stop it up.

Int. 8. Was that done before or after the cooking?

Ans. To the best of my knowledge, after the cooking; this completed the process. If not cooked enough, there were one or two cases where it was cooked a second time.

110 Int. 9. Were the cans made at Nathan Winslow's?

Ans. At Winslow and Tolman's workshop. Some of the cans I made myself.

Direct resumed:

Int. 1. Please state the condition of the art or knowledge of making cans?

Ans. The cans were made under Mr. Isaac Winslow's direction. He wished them made strong, so as to bear pressure.

ANDREW MULNIX.

Deposition of Samuel A. Breed, for complainant, taken March 29, 1871.

I, DANIEL A. BREED, of Washington, in the District of Columbia, being duly sworn, on oath depose and say as follows:

Int. 1. State your name, age, residence and occupation.

Ans. Daniel Breed; 57 years; Washington; solicitor of patents and consulting chemist.

Int. 2. Had you ever any official connection with the Patent-Office? If so, what was it?

Ans. I was assistant examiner and acting first examiner in 1853; in the whole, was appointed in 1852 and remained till 1857. Since that time I have been acting as solicitor of patents and consulting chemist.

Int. 3. Do you remember of the filing of the application of Isaac Winslow for letters-patent on preserving green corn? And if yea, by whom was it examined, and what was done with the case?

Ans. I do remember the application of Isaac Winslow. It
111 was first examined by myself, and the case was ordered to be divided before being examined on its merits. Upon the examination of the case upon its merits it was my view that it should be patented, but my superior directed me to reject it upon the best references that I could find. There was an officer in the same Department, by name, Tissowski. He informed me that the country women in Poland tied a bladder over the mouth of a bottle, and then pricked it to let out the steam. And this was embodied in the letter of reference in Mackenzie's book of receipts.

Int. 4. Whether or not you ever saw Isaac Winslow in and about the Patent-Office between '53 and '60, and what was his errand there?

(Objected to as immaterial.)

Ans. I saw Mr. Winslow at the Patent-Office several times during that period. He was in pursuit of his patent.

Cross-examined by Mr. Sewall:

To whom did Isaac Winslow apply when he made his application?

Ans. The application was addressed to the Commissioner of Patents, and, being assigned to my desk, the chemical department, for examination, he came to see me and my chief.

Int. 2. Who was your superior, and what was his relation to the office?

Ans. Leonard D. Gale, primary examiner.

Int. 3. How long was Gale in said Office, and when did he go out, if you know?

Ans. I have no data before me, but I think he was appointed in '48 and retired in '57. He was there all the time I was in the Office?

Int. 4. Did you write the letter or decision of the Office named in your 3d int., and was it a rejection of the case on Winslow's case under the rules and regulations of the Patent-Office?

112 Ans. I did write the letter, and it was a rejection of the case, but not a final rejection.

Int. 5. After said rejection, when, where, and with whom did you see said Winslow in and about the Patent-Office, and what did he do in the further prosecution of his patent?

Ans. I have no memorandum by which to fix definitely this answer, but I saw Mr. Winslow in rooms 2 and 4; 2 occupied by me, 4 by my chief. Saw him several times; cannot give years or months. He discussed the matter with me and my chief. The obstacle was Gale's judgment. Cannot say up to what date Winslow was there.

Int. 6. Did you make affidavit in relation to the proceedings of the Patent-Office and your agency therein, relating to the prosecution of the Winslow application, in the case of Jones et als. *v.* Hodges, and is said affidavit a full and true account thereof, and will you append it to this deposition?

Ans. I made such affidavit, and it is a full and true account. The same may be appended. I wish to explain one sentence. I say in that affidavit that I was an examiner and also a solicitor; I mean, of course, that I was not solicitor until my term of office as examiner had expired.

DANIEL BREED.

Deposition of B. S. Hedrick, for complainant, taken March 29, 1871.

I, Prof. BENJ. S. HEDRICK, being duly sworn, on oath depose and say as follows:

Int. 1. State your name, age, residence, and occupation.

Ans. 44 years; principal examiner in the U. S. Patent-Office; reside in Washington, D. C.

113 Int. 2. When did you first enter the Patent-Office?

Ans. April 11, 1861.

Int. 3. Did you ever have the application of Isaac Winslow, on preserving green corn, in your hands for examination? If yea, what was its condition?

Ans. I did. The case had been but once rejected before I came into the Office. The inventor had been ordered to divide his case by a previous order of the Patent-Office. The order to divide was before the rejection, and I took it up in the condition in which it was under the order to divide. The case was examined and allowed by me, and in this condition it was placed under the order of the Patent-Office before mentioned.

Int. 4. Did you ever see Isaac Winslow at the Patent-Office?

Ans. I think not. I saw John Winslow Jones, and am pretty certain that Isaac Winslow was there a short time before about the case, because I think he left direction where he was to be found.

(Last clause objected to on account of uncertainty.)

Cross-examined by Mr. Sewall:

Int. 1. Who made application to you in relation to the Winslow patent?

Ans. Mr. Jones, and Dr. Breed, as his attorney.

Int. 2. Did you ever have an interview with Isaac Winslow himself in relation to his patent, or a direct communication with him in relation to the issue thereof?

Ans. I think not.

Int. 3. Were there any rules and regulations in relation to proceedings touching rejected applications for patents of the Patent-Office and the further prosecution of the same between 1853 and 1862, and were you familiar with the same?

114 Ans. There were, and I was familiar with them.

Int. 3. Are said regulations in print; and if so, will you append them to this deposition?

Ans. They are in printed form, and are to inform applicants how they are to proceed. They are changed, from time to time, as Congress modifies the patent-laws. I cannot append a copy, because I do not know where I can get one. The patent was issued in compliance with law, as I understood it. A second action had been called for by the renewed oath, but had not been given.

Int. 4. Were intermediate proceedings required of the parties in interest on rejected applications in the Patent-Office to preserve and further prosecute the same; and if yea, what were such proceedings between '53 and '62, as you understand?

Ans. Applicant had to do something to show that he desired a further action and was not satisfied with the references. Prior to the law requiring the renewal of the oath, the rule was for him to recall the papers and renew the oath of invention. This had been done in this case.

Int. 5. Before whom was the oath of invention renewed; by whom was the recall of papers made?

Ans. The recall of papers was by the inventor himself. I do not know before whom the oath was taken. I found on the file that the oath had been renewed, and that the action there called for had not been made.

Int. 6. Is there kept a record in the U. S. Patent-Office of all matters relative to rejected cases?

Ans. There is of all official action and all intermediate proceedings.

B. S. HEDRICK.

115 *Deposition of James P. Baxter, for complainant, taken May* 23, 1871.

I, JAMES P. BAXTER, of Portland, county of Cumberland, and district of Maine, being duly sworn, on oath depose and say, in answer to interrogatories, as follows:

1. State your name, age, residence, and occupation.

Ans. James P. Baxter; forty; Portland; preserver of hermetically-sealed goods.

2. Are you one of the plaintiffs in this suit?

Ans. I am.

3. How long have you been engaged in the business of hermetically-sealing goods? What kinds of goods have you thus been accustomed to preserve; and what experiments, if any, and to what extent, have you made on such goods; and on what class of these goods?

Ans. Have been in the business about eight years. Have preserved meats, fish, fruits and vegetables, and green corn. I have experimented particularly on fish and on green corn. Have tried various processes. On green corn I have probably experimented more than on anything

else. I have used the Durand process, by chemical baths, and the Winslow process. I have experimented with the Durand process, although it is not intended to be applied to corn. The only successful process with green corn I have found to be the Winslow process, that is, cutting the green corn fresh from the cob, in the milky state, saving the pieces, packing the corn in cans and hermetically sealing it, and then bathing and venting according to the directions in the Winslow patents. This I have found gives an article of green corn. I have experimented to the amount of several thousand cans a year. Have been accustomed to pack for the market a million or a million and one-half cans per annum.

116 4. State whether you sent any cans of green corn preserved to S. Dana Hayes, of Boston, for the purpose of experiment and analysis. How were the same marked or labelled, and how were they preserved? Give the steps of the treatment or process.

Ans. I did send several cans to him. He was consulted in this suit by us, as an expert. The cans were marked "Corn packed by Durand's process, S. Johnson, New York." I packed the cans as follows: I used great care that it should be well packed. I placed the corn, being in a raw or crude state, in a vessel of tin. I closed the aperture of such vessel so as to completely cut off and exclude all communication with the external air. For closing the can I used the process of cementing or soldering. When the vessels had been thus charged and well closed, I placed them in a boiler, they being so arranged as not to knock together to their injury. Said boiler was filled with water so as to cover the vessels, which water I gradually heated to boiling, and continued the ebullition to a certain time which my experience taught me the nature of the article and the size of the said vessels demanded. For a portion of the time I made a small aperture in the top of said vessels. The puncture was then closed up. These I sent to S. Dana Hayes, witness in this case, as before stated. This corn was packed in September, 1870.

Cross-interrogatories:

1. Please explain minutely the process of packing green corn by the "Durand process," mentioned by you in your answer to interrogatory 3; and also state in what respect it differs from the Winslow process.

2. How many cans of corn were sent to S. Dana Hayes by you, marked "Corn packed by Durand's process, S. Johnson, New York?" Where was the corn that was used grown? Where was it put up?

117 3. Is the process described by your answer to int. 4 the Durant process?

Answer to cross-interrogatory first. I placed the corn, being in a raw or crude state, in a vessel of tin. I closed the aperture of such vessel so as to completely cut off and exclude all communication with the external air. For closing the can I used the process of cementing or soldering. When the vessels had been thus charged and well closed, I placed them in a boiler, they being so arranged as not to knock together to their injury. Said boiler was filled with water so as to cover the vessels, which water I gradually heated to boiling, and continued the ebullition to a certain time which my experience taught me the nature of the article and the size of the said vessels demanded. For a portion of the time I made a small aperture in the top of said vessels. The puncture was then closed up. The Durand process differs from Winslow's process in so marked a manner as to make it evident that it was not intended to be applied to the preservation of cereals. In the

first place, Winslow's process contemplates taking corn in an immature state and breaking the cells so as to liberate the juices, which, exuding, form a menstruum or fluid envelop around the kernels, and produce a greatly superior article, as, after being placed in this state in the can and the can plunged at once in boiling water, the albumen is rapidly coagulated and the mass fixed in its best state. I find no directions in Durand's process for packing anything in an immature or green state. Particular directions based upon the condition of corn are very essential, as the packing of corn simply, (even if it be held that the Durand patent applies to cereals at all,) with no specifications whether it be green or ripe, would be of no practical value at all. Even a specifica-
118 tion describing a method of packing corn simply would be insufficient, as it would still have to be ascertained, by experiment and trial afterwards, as to whether it applied to green or ripe corn, for what would prove successful with ripe corn would not prove successful with green. Neither do I find in Durand's patent anything about the condition of the kernels of corn put into the can.

Answer to cross-interrogatory second. I sent three or four cans of corn to S. Dana Hayes, marked "Corn packed by Durand's process." It was grown in Westbrook and then packed.

Answer to cross-interrogatory third. The process described by me in my answer to interrogatory first is Durand's process for packing meats, fruits, and vegetables, and all the process known by that name.

Direct resumed:

In what way did you prepare the corn packed by you according to Durand's process for preserving animal and vegetable food? State your reason for this, and state further if, in your opinion, corn would keep by following Durand's specification.

Ans. Finding no directions in Durand's patent with reference to treating cereals, and especially the kernels of corn, I carefully removed the husk and silk, and placed the ears of corn in the can whole and in their natural state. Durand's patent renders this imperative, for the following reasons: When the cells of corn are broken so as to allow the juices to flow, fermentation takes place much sooner than when the kernels are left unbroken; indeed, fermentation is believed to commence immediately. To apply heat "gradually" to a mass of corn prepared by the Winslow process, that is, with the cells broken and the
119 milk or juices exposed, would only hasten fermentation. It is therefore necessary to apply to corn thus prepared as much heat, and as quickly as possible, so as to coagulate the juices and fix the mass in its best state. Experience has taught that when the heat is not applied quickly enough the corn spoils and loss results. I doubt even if corn on the ear, with the kernels unbroken, would keep for shipment to warm climates, if bathed as the specifications in Durand's patent direct, that is, by placing the cans in cold water and gradually raising the heat to the point of ebullition.

JAMES P. BAXTER.

DISTRICT OF MAINE:

MAY 23, 1871.

Subscribed and sworn to before me as above.

NATHAN WEBB,
U. S. C. C. Commissioner.

Deposition of S. Dana Hayes, for complainant, taken April 29, 1871.

Interrogatories proposed to S. Dana Hayes.

1. Please state your name, age, residence, and occupation.

2. Have you heretofore been employed or summoned as a witness in questions arising out of infringement of letters-patent? If yea, state generally to what extent, and upon what class of questions, and in what capacity.

2. Have you seen certain letters-patent, granted to Isaac Winslow upon the preservation of green corn, numbered ? And if yea, state what art or process is, in your opinion, described and claimed in the said patents.

4. Have you seen letters-patent granted to Peter Durand, in England, No. 3374? If yea, state what art or process is in your opinion described and claimed in said letters-patent.

120 5. Have you seen letters-patent granted to Henry Gunter, in England, No. 8776? And if yea, what process is, in your opinion, described and claimed in said patent?

6. Have you seen English patents No'. 8874 and 8378, issued to John Wedheim? And if yea, what process is described and claimed in said patents?

7. Of what is green corn in the milky state composed? What are its distinguishing characteristics and ingredients?

8. If green corn were boiled on the cob, so as to cook the same, and then the kernels removed, state what would be the effect upon the green corn if afterwards packed in hermetically-sealed cans.

9. If green corn were cut from the cob and the kernels boiled in water, so as to cook the same, what would be the effect upon the aroma and juices of the corn?

10. In cutting green corn from the cob, in order to preserve the same by first packing it in hermetically-sealed cans, raw, and then cooking, what effect upon, or connection with, a preservation of the corn, if any, has the dividing or breaking open of the kernels?

11. State what, if anything, is present among the kernels of the raw green corn, when placed in cans preparatory to sealing up; and what would be the effect upon the cereal of these agents, if allowed to remain in the corn, when packed in the cans?

12. What effect has the application of heat upon the presence of these agencies?

13. State what resulting difference, if any, there is to the character of the preserved article, between cutting the corn from the cob, cooking it in water in open vessels, then canning it; and also between cooking green corn on the cob, then cutting it off and sealing it up in cans, and the process set forth in the Winslow patents.

121 14. If green corn were cut from the cob while raw, and in the milky state, then placed in open cans and cooked, what would be the result?

15. State the difference in the process or treatment, and in the effect upon green corn, of Peter Durand, (as you have heretofore described them,) to be set forth in his letters-patent, and that of Isaac Winslow, as you have heretofore described them to be set forth in his letters-patent.

16. Have you made analyses of green corn preserved by the Durand and Winslow processes? If yea, state the condition of the preserved article in each instance.

Cross-interrogatories to be propounded to S. Dana Hayes.

1. Will you please annex to your deposition a copy of the letters-patent granted to Peter Durand in England, mentioned in direct interrogatory No. 4? and state whether they are the same letters-patent upon which you found your opinion as to the process described by you in answer to said interrogatory.

2. Will you please annex to this deposition a copy of the letters-patent, granted to Henry Gunter in England, and mentioned and described in the direct interrogatory No. 5? and state whether they are the same letters-patent, concerning which, and the process therein described, your opinion is asked in said interrogatory.

3. Will you please annex to this deposition a copy of the letters-patent, No. 8874 and 8378, issued to John Wedheim, mentioned in the direct interrogatory No. 6? and state whether they are the same patents concerning which, and the process therein described, you have given your opinion in answer to said interrogatory.

4. What chemical change, it any, is produced in the manufactured article by venting the cans and allowing the escape of oxygen during the process of cooking, as explained by you in answer to interrogatories in the direct examination? State all the changes.

122 5. If oxygen and other gases, tending to produce fermentation, and opposed to the preservation of green corn by the Winslow process so called, escape from the can, when the can is punctured as described in that process, why will not the aroma of the corn escape at the same time?

6. What is the aroma of sweet corn, and is it not liberated by heating?

7. If, in answer to direct interrogatory No. 15, you state there is a difference between the process, treatment, and effect upon green corn by the Durand process and the Winslow process, will you please give all the reasons on which you base your opinion?

8. If you say that you have made an analysis of corn preserved by the Durand process, state where and of whom and when you obtained the corn; at what stage of ripening the corn was taken for preserving. Describe each step taken in preserving the corn analyzed by you, as preserved by the Durand process. How long and in what vessel was it subjected to heat? Were you present, and did you personally superintend the process of preservation?

9. What would have been the effect upon the article preserved if the vessel in which the corn preserved by the Durand process was heated, as described in your experiment, had been punctured, as described in the Winslow process?

The defendant objects to direct interrogatories 3, 4, 5, 6, 13, as calling for the opinion of the witness upon a matter of law and the construction of the letters-patent.

R. K. SEWALL,
A. A. STROUT,
B. BRADBURY,
Att'ys for Respondents.

Re-direct:

1. State what would be the consequence upon the preserved article—corn, green—if put into vessels in a raw or crude state.

123 2. State the effect upon green corn preserved in tin cans, if, after bathing the cans, the same were submitted to fire heat or the action of flames.

Cross-interrogatories:

1. What do you mean by the term "raw or crude state?"

It is agreed that Henry L. Hallett, esq., shall take the foregoing deposition without commission. Deposition to be taken with usual formalities in caption and returned to clerk U. S. C. C., Portland, Maine.

A. A. STROUT.
WM. HENRY CLIFFORD.

Ans. 1. S. Dana Hayes; thirty-one years old; reside in Brookline, Massachusetts; am a consulting chemist and State assayer and chemist for the commonwealth of Massachusetts.

Ans. 2. I have been frequently employed in such cases, as a chemical expert. I have studied chemistry from boyhood, with the first teachers in this country and in Europe. I have been in regular practice for eleven years, and have made a special study of chemical questions involved in patent cases. I have prepared myself by study, laboratory experience, and general practice of my profession to answer such questions.

Ans. 3. I have examined five different letters-patent, numbered 34,928, 35,274, 35,346, 36,326, and 51,379, granted to Isaac Winslow. In my opinion these patents describe and claim processes for preserving green Indian or sweet corn, cut from the cob, in its own juices, as a new article of manufacture.

Ans. 4. I have seen and examined this patent. It describes and claims in very general terms a method of preserving animal food, vege-
124 table food, and other perishable articles. In my opinion, the process given is only applicable to meats, fish, certain fruits, and coarser kinds of vegetables, but it would not succeed with green sweet corn. I would not undertake to preserve such a delicate vegetable as green corn by the process which is given in very general terms in this Durand patent. It is dated in 1810, at a time when sweet corn was not used in England.

Ans. 5. I have seen and examined this patent. It describes a process for preserving animal and vegetable substances; but, in my opinion, it is not a suitable process for preserving green sweet corn, and the description is not such an one as would enable me to successfully preserve this delicate vegetable or unripe cereal. The specification is deficient in details and indefinite.

Ans. 6. I have seen and examined both the patents of John Wedheimer. They describe and claim so-called improvements in the mode of preserving animal and vegetable substances and liquids. They especially refer to certain forms of instruments or apparatus, and to a mode of preserving large cases of animal and vegetable substances, but they contain no description of processes that would be suitable for preserving green sweet corn.

Ans. 7. Kernels of green sweet corn, in their milky state, are composed of the constituents named, and in the proportions given at the end of this answer. Green sweet corn is a peculiar substance, differing materially from any other cereal, seed, fruit, or vegetable used as food. Its composition and structure are such that it is singularly susceptible to fermentative decompositions and changes, more so than any fruit or vegetable that has been successfully preserved in hermetically-closed packages for any considerable length of time. Its liability to rapid change is not due to any one particular constituent, but to the presence of such substances as gluten, sugar, fat, and starch, together,

125 and in proportions best adapted for fermentation and action upon each other. Its peculiar flavor, other than its sweetness, is contained in and associated with the fat or oil present, and very slight fermentations of the other constituents are sufficient to destroy it. Kernels of sweet corn, as compared with sweet peas, for instance, are much more delicate and liable to change; they contain a much larger proportion of milk, juice or sap, which itself contains more sugar, starch, and fat than the juice of sweet peas; and the glutenous or nitrogenous constituent, which acts as the ferment, or primary cause of change, is much more active in the juice of sweet corn than in that of sweet peas. As compared with fruits like peaches, for instance, kernels of sweet corn contain only one-eighth part as much water, and the peaches contain no fat oil, besides other equally important differences; and fruits are much less liable to ferment than sweet corn; they are more easily packed and preserved. Sweet corn, in common with other cereals, contains more phosphorous or phosphoric acid than fruits and other vegetables.

One hundred parts of green sweet corn—kernels—contain:

Water	9.16
Gluten and nitrogenous matter	11.63
Starch	57.98
Sugar	6.28
Gum	3.14
Fat or oil	7.39
Fibre	2.65
Mineral matter	1.77
	100.00

Ans. 8. The juice or milk would be, to a great extent, absorbed by the cob and water during the boiling; so that the corn would be comparatively tasteless, and the proportion of woody fibre greatly increased by the abstraction of other constituents. Corn treated in this
126 way would not be so palatable as that preserved by the Winslow process; it would be more "stringy," less sweet, and have less flavor.

Ans. 9. The juice or milk would be expelled and dissolved out of the kernels by boiling water, leaving them less nutritious, and not so sweet nor so highly flavored as they should be for successful preservation in cans.

Ans. 10. The whole success in preserving sweet corn depends upon this cutting open or breaking of the kernels before they are put into the cans for cooking; and I consider this as the distinguishing feature and one of the most essential parts of the Winslow process. But in the Durand patent—a copy of which I now place in the hands of the commissioner—this important part of the process has been entirely overlooked, and in this specification it is expressly stated that "vegetable substances are to be put into the vessel in the raw or crude state;" and it would be impossible to cook green corn in the raw or crude state, by following the directions of Durand's patent, and obtain any result nearly so nutritious or good as that obtained by cutting open, breaking, and separating the kernels from the cob and preserving only the kernels, as in the Winslow process; because, when green corn is heated in its raw, crude state, or on the cob, especially if in a closed or nearly closed can, it undergoes a boiling or digesting process, during which the porous cob absorbs most of the juice or milk from the kernels, and if heated sufficiently long, the cob itself will become nearly as sweet and flavored like the

kernels, the latter becoming equally tasteless. But when kernels that have been cut open, broken, and removed from the cob are heated in closed cans, the juice or milk partially exudes from the kernels, surrounding each and all of them in a fluid in which they are cooked, and this fluid, being coagulated by the heat, preserves the mass from
127 fermentation and change, even when there is a little air enclosed with it in the cans. In the patents of Gunter and Wertheimer, referred to in the fifth and sixth interrogatories, there is no mention of this important part of the Winslow process. All these specifications read that the substances to be preserved are to be put in the cases in their "natural state," or "they may be first scalded."

Ans. 11. Kernels of raw green corn contain atmospheric air and carbonic-acid gas within their cells, and in the interstices, when packed in cans preparatory to sealing up. The presence of air is a necessary condition to fermentation, and if it was allowed to remain distributed throughout the mass of corn, it would support fermentation and decomposition, caused by the gluten and nitrogenous matters present. Without air fermentation would not take place; but in all corn that has been picked from the stock for any length of time incipient decomposition has set in, and the active germs of fermentation are present.

Ans. 12. By expanding the air and replacing it with steam, it removes to the upper part of the can this supporter of decomposition. It destroys the germs of fermentation more or less perfectly; and it coagulates the juice or milk of the sweet corn.

Ans. 13. The difference between cutting the corn from the cob, releasing the juice from the kernels by so doing, then packing it in cans for preserving with the juice and milk, and between boiling, either on the cob or off the cob, before putting into cans, becomes very apparent in the finished preserved article. All the sugar, starch, gum, and oil (including flavor) are present in that preserved in the juice; while that which has been first boiled contains much less of all these valuable constituents, which would be boiled out, while the proportion of insoluble and innutritious fibre is increased and left in the corn.

128 Ans. 14. It would lose more or less of its flavor, become dry, and thus comparatively tasteless, from the drying and hardening of the starch and gluten about and within the kernels.

Ans. 15. Green sweet corn, if prepared by following the process described in Durand's specification, would be on the cob, comparatively hard, and devoid of nutritious valuable juice while that preserved by following the directions of the Isaac Winslow patents would be kernels of corn cut open, soft, sweet, juicy, and containing all the constituents originally present.

Ans. 16. I have analyzed corn preserved by these processes. That of Winslow has very nearly the composition of fresh green corn, the analysis corresponding closely to that given in my answer to the seventh interrogatory. It contains all the constituents of fresh green corn in about the average proportions. That of Durand is corn on the cobs, and the kernels only were analyzed. These contained much less juice, less starch, sugar, gum, and oil, (including flavor.) They contained more fibre and were much harder than fresh green corn. The Winslow corn is much pleasanter, better, and more nutritious food than that of Durand.

This sample of Durand corn was not effectually preserved; the ends of some of the cobs had begun to decay, but these parts were not included in the portion taken for analysis.

Answer to cross-interrogatories.

Ans. 1. I have done so; and this copy is of the letters-patent upon which I found the opinion given in my answer to the fourth direct interrogatory. It is marked Exhibit No. 1, H. L. H., U. S. C.

Ans. 2. I annex a copy of the Gunter patent to this deposition, as desired; it is a copy of the letters-patent concerning which I
129 have answered in reply to the fifth direct interrogatory. It is marked Exhibit No. 2, H. L. H., U. S. C.

Ans. 3. I annex copies of these patents; and they are copies of the letters-patent concerning which I have answered when replying to the sixth direct interrogatory. They are marked Exhibits Nos. 3 and 4, H. L. H., U. S. C.

Ans. 4. There is no chemical change produced, and oxygen, as such, does not escape when the cans are vented.

Ans. 5. The aroma and flavor of the corn, being connected with and included in the fat or oil, would escape if the cans were open during the first application of heat, but the cans being hermetically sealed at this time, the contents are under pressure, and the aroma or flavor does not leave the kernels of corn before it has been enclosed or confined by the coagulating-juice; so that when the cans are vented only air, carbonic-acid gas, and steam escape; but if the venting is continued too long, I have no doubt that the corn would be injured thereby. The Winslow specifications give directions to vent for a short time only, and to "seal each can immediately" for this reason.

Ans. 6. The aroma of sweet corn is its peculiar odor. It is liberated by heat, excepting when under pressure.

Ans. 7. The reasons, given briefly, are as follows: Durand's process, in my opinion, was not intended to apply to green sweet-corn; I form this judgment partly from its date and from the want of detail and proper description in the specification. In this patent it is stated that "vegetable substances are to be put into the vessel in the raw or crude state," which, if it was intended to apply to green corn at all, means that the corn shall be raw, uncooked, and crude, or on the cob, and in this form it is not in proper condition for successful preservation. Then Durand states particularly that he covers "the vessels with cold
130 water, which he gradually heats to boiling;" and again, "or in any other fit situation for gradually and uniformly raising the temperature of the same; and further on in his specification he sometimes leaves "the aperture of the vessel, or a small portion thereof, open until the effect of the heat shall have taken place;" all of which manipulations would injure green sweet corn, and are entirely different from Winslow's process. Durand does not state how corn shall be cut from the cob; he provides no means for doing it, and corn preserved by following the description in his specification as closely as the general terms used there would allow would be of very poor quality, comparatively hard and stringy, deficient in juice, sweetness, flavor, and nutritious constituents. In all these respects Durand's process differs from Winslow's. And these are all the reasons that I now recall on which I based my reply to the fifteenth interrogatory.

Ans. 8. The Durand corn that I analyzed was received from Mr. J. P. Baxter, of Portland. The tin can containing it was marked, "Green corn, packed by Durand's process, S. Johnson, N. Y." And I now have an unopened can of the same lot, marked in the same way, and just as it was received. This corn was on the cobs; it was a variety of sweet

corn, and I judge from its appearance that it had been packed when green.

Ans. 9. It would not have had any effect upon the corn; it would only have allowed the escape of some of the expanded air from the cans.

Replies to redirect interrogatories:

Ans. 1. Durand, in his patent, a copy of which I have hereto annexed, says that "vegetable substances are to be put into the vessel in the raw or crude state;" and if green corn was preserved in this form it would be on the cob, the kernels would be deficient in juice, starch,
131 sugar, gum, and fat, (including flavor;) they would contain more fibre and be harder than fresh corn.

Ans. 2. It would be almost impossible to employ fire heat and flames upon cans containing preserved green corn, without burning and destroying some of the corn; and unless great care was exercised the tin cans themselves would be unsoldered and opened by such applications of heat and flame, as are described in the Gunter and Wertheimer patents, copies of which I have by request annexed to this deposition.

Answer to last cross-interrogatory.

1. It is a term used in the Durand patent; and when applied to corn it must mean uncooked, and just as picked in the field, or perhaps with the leaves removed. I consider that it would mean corn on the cob, and not carefully-cut, open, juicy kernels of corn.

S. DANA HAYES.

EXHIBIT No. 1.—H. L., U. S. C.

A. D. 1810. No. 3372.

Preserving animal and vegetable food.—Durand's specification.

To all to whom these presents shall come:

I, Peter Durand, of Hoxton Square, in the county of Middlesex, merchant, send greeting:

Whereas, His most Excellent Majesty King George the Third did, by his letters-patent, under the great seal of the United Kingdom of Great Britain and Ireland, bearing date at Westminster, the twenty-fifth day of August, in the fiftieth year of his reign, give and grant
131 unto me, the said Peter Durand, my ex'ors, adm'ors, and assigns, his special license, full power, sole privilege and authority, that I, the said Peter Durand, my ex'ors, adm'ors, and assigns, during the term therein mentioned, should and lawfully might make, use, exercise, and vend, within England, Wales, and the town of Berwick-upon-Tweed, an invention communicated to him by a certain foreigner residing abroad, of the method of "preserving animal food, vegetable food, and other perishable articles, a long time from perishing or becoming useless;" in which said letters-patent there is contained a proviso, obliging me, the said Peter Durand, by an instrument in writing under my hand and seal, to cause a particular description of the nature of the said invention, and in what manner the same is to be performed, to be enrolled in His Majesty's high court of chancery, within six calendar months after the date of the said recited letters-patent, as in and by the same, relation being thereunto had, may more fully and at large appear.

Now, know ye, that, in compliance with the said proviso, I, the said Peter Durand, do hereby declare that the nature of the said invention,

and the manner in which the same is to be performed, are particularly described and ascertained as follows, that is to say:

First. I place and inclose the said food or articles in bottles or other vessels of glass, pottery, tin, or other metals or fit materials; and I do close the aperture of such containing vessels so as completely to cut off and exclude all communication with the external air; and as to the method of closing, I do avail myself of the usual means of corking, airing, luting, or cementing; and in large vessels I make use of corks formed of pieces glued together in such a manner as that the pores of that substance shall be in a cross direction with regard to the aperture into which such corks are to be driven; and I do also, in such vessels as may admit of
133 or require the same, make use of stoppers fitted or ground with emery, or screw-caps, with or without a ring of leather or other soft substance between the faces of closure, and also of cocks or cross plugs or covers of leather, cloth, parchment, bladder, and the like.

Secondly. When the vessels have been thus charged and well closed, I do place them in a boiler, each separately surrounded with straw, or wrapped in coarse cloth, or otherwise defended from striking against each other; and I fill the said boiler so as to cover the vessels with cold water, which I gradually heat to boiling, and continue the ebullition for a certain time, which must depend upon the nature of the substances included in the vessels, and the size of the said vessels, and other obvious circumstances, which will be easily apprehended by the operator without further instructions. Vegetable substances are to be put into the vessel in the raw or crude state, and animal substances partly or half-cooked, although these may also be put in raw. The food or other articles thus prepared may be kept for a very long time in a state fit for use, care being taken that the vessel shall not be opened until their said contents shall be wanted for consumption.

And, lastly, I do declare, that although the application of the water-bath, as hereinbefore described, may be the most commodious and convenient, I do likewise avail myself of the application of heat by placing the said vessel in an oven, or a stove, or a steam bath, or any other fit situation for gradually and uniformly raising the temperature of the same, and suffering them to cool again; and, further, that I do, as the choice of the consumer or the nature of the said food or other articles may render preferable, leave the aperture of the vessel, or a small portion thereof, open until the effect of the heat shall have taken place, at which period I close the same.

134 In witness whereof, I, the said Peter Durand, have hereunto set my hand and seal the thirtieth day of August, in the year of our Lord one thousand eight hundred and ten.

PETER DURAND. [L. S.]

And be it remembered that, on the thirtieth day of August, in the year of our Lord 1810, the aforesaid Peter Durand came before our said lord, the King, in his chancery, and acknowledged the specification aforesaid, and all and everything therein contained and specified in form above written. And also the specification aforesaid was stampt according to the tenor of the statute made for that purpose. Enrolled the thirtieth day of August, in the year of our Lord one thousand eight hundred and ten.

EXHIBIT No. 2.—H. L. H., U. S. C.

A. D. 1841. No. 8776.

Preserving animal and vegetable substances.—Gunter's specification.

To all to whom these presents shall come:

I, Henry Gunter, of Cullum street, Fenchurch street, in the city of London, merchant, send greeting.

Whereas her present most excellent Majesty, Queen Victoria, by her letters-patent under the great seal of Great Britain, bearing date at Westminster, the sixth day of January, in the fourth year of her reign, did, for herself, her heirs and successors, give and grant unto me, the said Henry Gunter, her especial license, full power, sole privilege and authority, that I, the said Henry Gunter, my ex'ors, adm'ors or
135 assigns, and such others as I, the said Henry Gunter, my ex'ors, adm'ors, or assigns, should at any time agree with, and no others, from time to time, and at all times during the term of years therein expressed, should and lawfully might make, use, exercise, and vend, within all her said Majesty's colonies and plantations abroad, my invention of "improvements in preserving animal and vegetable substances;" in which said letters-patent is contained a proviso, that I, the said Henry Gunter, shall cause a particular description of the nature of my said invention, and in what manner the same is to be performed, to be enrolled in her said Majesty's high court of chancery, within six calendar months next and immediately after the date of the said in part recited letters-patent, as in and by the same, reference being thereunto had, will more fully and large appear.

Now know ye, that, in compliance with the said proviso, I, the said Henry Gunter, do hereby declare that the nature of my invention, and the manner in which the same is to be performed, are fully described and ascertained in and by the following statement thereof, (that is to say:)

My invention relates to a mode of treating animal and vegetable substances in cases or vessels by heat, and thus cooking, or partially cooking, the same, and driving off the atmospheric air contained therein, whereby the animal and vegetable substances so treated may be preserved for a length of time in a fresh and pure state, and retain their natural flavor. And in order to give the best information in my power, I will proceed to describe the process as pursued by me. I employ (by preference) vessels or cases of tin, and of a cylindrical or other convenient form, such vessels each having one end fixed therein, and into these vessels I place such animal substances as I may desire to preserve, having first scalded them; I then solder on the other end of each vessel, so that the vessel will be hermetically closed, having in filling
136 allowed a small quantity of room in each vessel to permit the substance therein to swell. I then place a number of such vessels into a large boiler, and cover them with water and close the boiler, and cause the water therein to boil freely, but retaining it about two hundred and twelve degrees of Fahrenheit, and continue such boiling for about two hours and a half for animal matter, and from fifteen to twenty-five minutes for vegetable matter. I then take out such vessels, and on examination, if they show no unsoundness, I place them in a hot sand-bath, or other convenient means of applying heat, so as to leave the upper end uncovered; and I puncture therein a minute hole, and heat being kept up to insure its being above two hundred and twelve degrees of Fahrenheit, the air in the case or vessel will be driven

out with the steam, and when it is seen that the steam is coming very freely I close the minute hole by a soldering-iron whilst the steam is flowing off and in opposition thereto. The process will then be complete; and it may be remarked that by pursuing this process great advantages will be derived, as it will be evident that by causing the process of heat to be carried on during the time the vessel is hermetically closed, all the flavor of the substances treated will be retained, and the vessels will only be open so long as simply to allow of the air being driven off; from which circumstance the animal and vegetable substances will be preserved in the most advantageous manner.

And, in conclusion, I may remark, that although I have been thus particular in describing the exact means pursued by me, I do not confine myself thereto, so long as the mode herein described be retained, and I am aware that animal and vegetable matters may be preserved by simply placing them in such vessels as herein described, and closing them therein; but in place of having them hermetically sealed, when undergoing the process of heat to cook, or partially cook, the
137 same, to have a minute hole or holes in the cover, and allow the vapors to flow off during the whole time of applying heat, and then closing such vessels when the substances are cooked to the extent desired; but I do not consider such process nearly so advantageous as that above described, as much of the flavor of the animal or vegetable substance or substances, by the latter means would be driven off, whereas in the former processes the same are retained, as the cooking goes on during the time the vessel is hermetically closed.

In witness whereof, I, the said Henry Gunter, have hereunto set my hand and seal, this thirteenth day of January, in the year of our Lord one thousand eight hundred and forty-one.

HENRY [L. S.] GUNTER.

And be it remembered, that on the thirteenth day of January, in the year of our Lord 1841, the aforesaid Henry Gunter came before our said lady the Queen in her chancery, and acknowledged the
LYNCH. specification aforesaid, and all and everything therein contained and specified, in form above written, and also the specification aforesaid was stamped according to the tenor of the statute made for that purpose.

Enrolled the sixth day of July, in the year of our Lord one thousand eight hundred and forty-one.

138 EXHIBIT No. 3.—H. L. H., U. S. C.

A. D. 1840. No. 8378.

Preserving animal and vegetable substances and liquids.— Wertheimer's specification.

To all whom these presents shall come:

I, John Wertheimer, of West street, Finsbury Circus, in the city of London, printer, send greeting:

Whereas, Her present Most Excellent Majesty, Queen Victoria, by her letters-patent under the great seal of Great Britain, bearing date at Westminster, the eighth day of February, in the third year of Her reign, did, for Herself, Her heirs and successors, give and grant unto the said John Wertheimer, Her especial license, full power, sole privilege, and authority, that I, the said John Wertheimer, my ex'ors, adm'ors, and assigns, or such others as I, the said John Wertheimer, my ex'ors,

adm'ors, or assigns should at any time agree with, and no others, from time to time, and at all times during the terms of years therein expressed, should and lawfully might make, use, exercise, and vend, within England, Wales, and the town of Berwick-upon-Tweed the invention of "certain improvements in preserving animal and vegetable substances and liquids," communicated to me by a certain foreigner residing abroad; in which said letters-patent is contained a proviso, that I, the said John Wertheimer, shall cause a particular description of the nature of the said invention, and in what manner the same is to be performed, to be enrolled in Her said Majesty's high court of chancery within six calendar months next and immediately after the date of the said in part recited letters-patent, as in and by the same, reference being thereunto had, will more fully and at large appear.

139 Now know ye, that in compliance with the said proviso, I, the said John Wertheimer, do hereby declare that the nature of the said invention and the manner in which the same is to be performed, are fully described and ascertained in and by the following statement thereof, (that is to say:)

The invention relates to that mode of preserving animal and vegetable substances and liquids, where the matter to be preserved is placed in cases, from which the atmospheric air is more or less driven off by heat, and thus obtaining a more or less perfect vacuum; and the invention consists of a mode of more readily and certainly obtaining a vacuum, and then closing the opening in the case by soldering; and it is well known that on the extent to which the atmosphere is driven off and subsequently excluded depends the success of the process and the length of time which provisions may be preserved, and, so far as I am informed on the subject, up to the time of granting my said letters-patent there did not exist any mode of fully driving off the atmospheric air, and of soldering and positively closing the cases in which provisions were placed; and in order to give the best information in my power, I will proceed to explain the invention as practiced by me. The cases in which the animal or vegetable substances, whether in the solid state or in the form of soups and liquids, are to be placed in cases, and as nearly as possible to fill them; the covers are then to be soldered on, and each of such covers having one or two small holes, the larger of which is to be about the one-eighth of an inch in diameter, the other much less, even as small as the fiftieth of an inch. The cases and covers I prefer to make of sheet-iron or iron turned, but do not confine myself thereto. The cases thus covered are, with their contents, to be heated by a fire or hot plate, or other convenient means, to a temperature of somewhat more than 212° of Fahrenheit, in order to ensure the food being at the boiling point. By this means the steam, which is driven off from

140 the liquid which is in the provisions, will drive off the atmospheric air through the openings before mentioned; and in order to prevent the atmosphere entering, I apply a ring of heat or flame around the openings, which prevents the air passing through the openings into the cases; at the same time the steam, with the air from the inside of the cases, can, by the pressure within, be driven out at the openings. In thus applying a ring of flame I prefer to use gas, though I do not confine myself thereto; and in using gas I have a ring or hoop burner, having holes for jets all around the upper surface, and the under surface of the ring is covered with cotton or other soft material, which, being kept damped and pressed against the surface of a case containing provisions, will not allow any air to pass under the burner; and I apply one such ring or hook burner to each hole in the case, in such manner

that the hole is at or near the centre of the burner, and then, by pressing the burner on to the case, or the case up to the burner, I make the same as air-tight as possible and ignite the gas; the steam and air from within continue to be forced through the holes and through the flame, which, at the same time, owing to the interior of the flame having little air to supply combustion, will come together, and forms a hollow dome over the hole below, and thus most perfectly exclude the outer atmospheric air passing down through the flame. It should be stated that the provisions are to be submitted to the process of heat for more or less time, depending on its nature as heretofore, and according to the extent it is desired the same should be cooked, and the provisions, when meat or vegetables, may be put into the case in their natural state, or they may be first scalded. When the cooking has been carried on to the desired extent, and the operator is satisfied that all the atmospheric air which was in the provisions, and in the case, is fully driven off, which he will judge of by observing that the steam is coming off with
141 considerable force, he will then proceed to solder up the holes, commencing by stopping the larger hole, and then the smaller one, keeping up the temperature during this process, in order to ensure the boiling point being maintained within the case, and that the pressure within may be such, up to the last moment, as to ensure the driving off every portion of atmospheric air from within the case; for it is of the utmost consequence that every particle of atmospheric air should be driven off; and I continue the heat for some minutes after the vessel is hermetically closed, when only partially cooking. Having completed the process as above described, I allow the case to cool, and stand till the next day, and then light the gas-burner around one of the openings, and unsolder that opening, by which means any air which may have remained in the food, which it is liable to do when only slightly cooked, will pass off and be consumed; the hole is again soldered, and the process complete. By this mode of ensuring the driving off of the atmospheric air, and of closing the holes air-tight by the aid of the ring-burner, very large cases of meat or vegetable food may be preserved with certainty and for a great length of time.

I sometimes, in place of using the burner at the opening through which the air is expelled, operate in the following manner: Having soldered on the cover of the case, I apply heat in order to expel the atmospheric air through the small hole or holes left, and having forced the air out as fully as I can by such means, I then solder up the small openings; but not having used the heat or flame at the openings, the vacuum will not be sufficient to preserve the provisions fully for a long time, and such process has been before resorted to, but without success; but this part of my invention consists in having first driven off as much air as I can by heat, and having soldered up the small openings, I continue the process of heat from about ten to thirty minutes, accord-
142 ing as the case is small or large; a small case, being under 10 lbs., will not require more than ten minutes. By either of the above modes very large cases can be preserved with certainty, which is not the case with other modes before resorted to.

Having thus described the invention, I would have it understood that what I claim as the invention is—

First, the mode of employing a burner for excluding the atmospheric air, and for closing the openings of cases wherein animal and vegetable substances and liquids produced therefrom are to be preserved as above described; and secondly, I claim the mode of preserving animal and vegetable matter in closed cases by expelling as much air as I can by

means of heat, then closing the openings and continuing the heat after closing for a time, in order to decompose the remaining atmospheric air.

In witness whereof, I, the said John Wertheimer, have hereunto set my hand and seal, this eighth day of August, in the year of our Lord one thousand eight hundred and forty.

JNO. [L. S.] WERTHEIMER.

And be it remembered that on the eighth day of August, in the year of our Lord 1840, the aforesaid John Wertheimer came before our said Lady the Queen in her chancery, and acknowledged the specification aforesaid, and all and everything therein contained and specified, in form above written, and also the specification aforesaid was stamped according to the tenor of the statute made for that purpose.

LYNCH.

Enrolled the eighth day of August, in the year of our Lord one thousand eight hundred and forty.

143 *Disclaimer.*

In the matter of a patent to John Wertheimer, of West street, Finsbury Circus, in the city of London, printer, for an invention (communicated to him by a certain foreigner residing abroad) of "certain improvements in preserving animal and vegetable substances and liquids," bearing date at Westminster, the eighth day of February, one thousand eight hundred and forty, and which said letters-patent, and all interest therein, have been duly assigned to George Blogg, of Bucklersbury, in the city of London, diamond merchant, in trust for Simon Reüter, of Finsbury chambers, in the city of London, merchant, and for himself, the said George Blogg, and for Stephen Goldner, of West street, Finsbury Circus, in the city of London, merchant, in certain shares or proportions.

Disclaimer and memorandum of alteration proposed to be entered by the said George Blogg as such assignee of the said letters-patent as aforesaid, with the clerk of the patents of England, pursuant to an act of Parliament passed in the fifth and sixth years of the reign of his late Majesty, King William the Fourth, intituled "An act to amend the law touching letters-patent for inventions," and to an act of Parliament passed in the seventh and eighth years of the reign of her present Majesty, Queen Victoria, intituled "An act for amending an act passed in the fourth year of the reign of his late Majesty, intituled "An act for the better administration of justice in His Majesty's privy council, and to extend its jurisdiction and powers."

In the said specification the patentee did fully describe the said invention, and I, the said George Blogg, have been lately advised that the specification claims more than is useful; for which reason I do wish to disclaim and I do hereby disclaim so much of the said specification as described any matter of invention other than or beyond the
144 process of causing animal and vegetable substances and liquids, when placed in cases, to be heated to a higher degree of heat than the boiling point, to ensure the driving off of the air more effectually by steam, then closing the cases in opposition to the flow of steam caused by maintaining the high heat, and then continuing such heat to the matter in the closed cases, as described in the said specification; and in order that this disclaimer and memorandum of alteration may be fully understood, I have hereunto annexed a copy of the said specification,

with the parts which I disclaim and alter ruled through or cancelled with red ink; and I do declare that this disclaimer and alteration is not such as will extend the exclusive right granted by the said letters-patent, and that I make this disclaimer and alteration with the privity and consent of the said Simon Reüter and Stephen Goldner respectively, testified by their respectively setting their hands and seals to these presents.

In witness whereof, I, the said George Blogg, have hereunto set my hand and seal, and the said Simon Reüter and Stephen Goldner have also hereunto set their hands and seals, this second day of July, in the year of our Lord one thousand eight hundred and forty-six.

SIMON REUTER. [L. S.]
GEORGE BLOGG. [L. S.]
S. GOLDNER. [L. S.]

(The parts which are underlined are cancelled with red ink in the original.)

To all to whom these presents shall come:

I, John Wertheimer, of West street, Finsbury Circus, in the city of London, printer, send greeting:

Whereas her present most excellent Majesty, Queen Victoria, by her letters-patent, under the great seal of Great Britain, bearing date at
145 Westminster, the eighth day of February, in the third year of her reign, did, for herself, her heirs, and successors, give and grant unto me, the said John Wertheimer, her especial license, full power, sole privilege and authority, that I, the said John Wertheimer, my ex'ors, adm'ors, and assigns, or such others as I, the said John Wertheimer, my ex'ors, adm'ors, or assigns should at any time agree with and no others, from time to time and at all times during the term of years therein expressed, should and lawfully might make, use, and vend, within England, Wales, and the town of Berwick-upon-Tweed, the invention of "certain improvements in preserving animal and vegetable substances and liquids," communicated to me by a certain foreigner residing abroad; in which said letters-patent is contained a proviso, that I, the said John Wertheimer, shall cause a particular description of the nature of the said invention, and in what manner the same is to be performed, to be enrolled in her said Majesty's high court of chancery within six calendar months next and immediately after the date of the said in part recited letters-patent, as in and by the same, reference being thereunto had, will more fully and at large appear.

Now know ye, that in compliance with the said proviso, I, the said John Wertheimer, do hereby declare that the nature of the said invention and the manner in which the same is to be performed are fully described and ascertained in and by the following statement thereof, (that is to say:)

The invention relates to that mode of preserving animal and vegetable substances and liquids where the matter to be preserved is placed in cases from which the atmospheric air is more or less driven off by heat, and thus obtaining a more or less perfect vacuum. And the invention consists of a mode of more readily and certainly obtaining a vacuum, and then closing the opening in the case by soldering. And it is well known that on the extent to which the atmosphere
146 is driven off, and subsequently excluded, depends the success of the process and the length of time which provisions may be preserved, and so far as I am informed on the subject, up to the time of

granting my said letters-patent, there did not exist any mode of fully driving off the atmospheric air and of soldering and positively closing the cases in which provisions were placed; and in order to give the best information in my power, I will proceed to explain the invention as practiced by me. The cases in which the animal or vegetable substances, whether in the solid state or in the form of soups and liquids, are to be placed in cases, and as nearly as possible to fill them; the covers are then to be soldered on, and each of such covers having one or two small holes, the larger of which is to be about the one-eighth of an inch in diameter, the other much less, even as small as the fiftieth of an inch. The cases and covers I prefer to make of sheet-iron or iron tinned, but do not confine myself thereto. The cases thus covered are with their contents to be heated by a fire or hot plate, or other convenient means, to a temperature of somewhat more than two hundred and twelve degrees of Fahrenheit, in order to insure the food being at the boiling-point. By this means the steam, which is driven off from the liquid which is in the provisions, will drive off the atmospheric air through the openings before mentioned; and in order to prevent the atmosphere entering I apply a ring of heat or flame around the openings, which prevents the air passing through the opening into the cases; at the same time the steam, with the air from the inside of the cases can, by the pressure within, be driven out at the openings. In thus applying a ring of flame I prefer to use gas, though I do not confine myself thereto, and in using gas I have a ring or hoop burner, having holes for jets all around the upper surface, and the under surface
147 of the ring is covered with cotton or other soft material, which, being kept damped and pressed against the surface of a case containing provisions will not allow any air to pass under the burner; and I apply one such ring or hoop burner to each hole in the case in such manner that the hole is at or near the centre of the burner, and then, by pressing the burner on to the case, or the case up under the burner, I make the same as air-tight as possible and ignite the gas; the steam and air from within continues (ing) to be forced through the holes, and although the flame, which at the same time, owing to the interior of the flame having little air to supply combustion, will come together and forms a hollow dome over the hole below, and thus most perfectly exclude the atmospheric air passing down through the flame.

It should be stated that the provisions are to be submitted to the process of heat for more or less time, depending on its nature as heretofore, and according to the extent it is desired the same should be cooked; and the provisions (when meat or vegetables) may be put into the case in their natural state, or they may be first scalded. When the cooking has been carried on to the desired extent, and the operator is satisfied that all the atmospheric air which was in the provisions and in the case is fully driven off, which he will judge of by observing that the steam is coming off with considerable force, he will then proceed to solder up the holes, commencing by stopping the larger hole and then the smaller one, keeping up the temperature during this process, in order to insure the boiling-point being maintained within the case, and that the pressure within may be such up to the last moment as to insure the driving off every portion of atmospheric air from within the case; for it is
148 of the utmost consequence that every particle of atmospheric air

should be driven off; and I continue the heat for some minutes after the vessel is hermetically closed, when only partially cooking. Having completed the process, as above described, I allow the case to cool and stand till the next day, and then light the gas-burner around one of the openings, and unsolder that opening, by which means any air which may have remained in the food, which it is liable to do when only slightly cooked, will pass off and be consumed. The hole is again soldered and the process complete. By this mode of insuring the driving off of the atmospheric air, and of closing the holes air-tight, by the aid of the ring-burner, very large cases of meat or vegetable food may be preserved with certainty, and for a great length of time.

I sometimes, in place of using the burner at the opening through which the air is expelled, operate in the following manner: Having soldered on the cover of the case, I apply heat in order to expel the atmospheric air through the small hole or holes left, andhaving forced the air out as fully as I can by such means, I then solder up the small openings; but not having used the heat or flame at the openings, the vacuum will not be sufficient to preserve the provisions fully for a long time, and such process has been before resorted to, but without success; but this part of my invention consists in having first driven off as much air as I can by heat, and having soldered up the small openings, I continue the process of heat from about ten to thirty minutes, according as the case is small or large; a small case, being under ten pounds, will not require more than ten minutes. By either of the above modes very large cases can be preserved with certainty, which is not the case with other modes before resorted to.

149 Having thus described the invention, I would have it understood that what I claim as the invention is—

First, the mode of employing a burner for excluding the atmosphere, and for closing the openings of cases wherein animal and vegetable substances, and liquids produced therefrom are to be preserved as above described.

And, secondly, I claim the mode of preserving animal and vegetable matter in closed cans by expelling as much air as I can by means of heat, then closing the opening and continuing the heat, after closing, for a time, in order to decompose the remaining atmospheric air.

In witness whereof, I, the said John Wertheimer, have hereunto set my hand and seal, this eighth day of August, in the year of our Lord one thousand eight hundred and forty.

To the clerk of the patents of England:

This is to certify that the above-named George Blogg, as assignee of letters-patent granted to John Wertheimer, of West street, Finsbury Circus, in the city of Londen, printer, has applied to me for leave to enter with you the above-written disclaimer and memorandum of alteration of a part of the specification of a certain invention contained in the said letters-patent granted to the said John Wertheimer, under the great seal of Great Britain, dated at Westminster, the 8th day of February, 1840, and to which a specification was duly enrolled; and having considered of the said application, and no objection having been made to the same, I hereby grant leave to the said George Blogg to file the said disclaimer and memorandum of alteration.

FRED. THESIGER.

TEMPLE, *June* 27, 1846.

150 SEAL OF THE PATENT OFFICE. Entered with and filed by the clerk of the patents of England, the eighteenth day of August, 1846.

And be it remembered, that on the second day of July, in the year of our Lord 1846, the aforesaid George Blogg came before our said lady the Queen, in her chancery, and acknowledged the disclaimer aforesaid, and all and everything therein contained and specified, in form above written, and also the disclaimer aforesaid was stamped according to the tenor of the statute made for that purpose.

BROUGHAM.

Enrolled the nineteenth day of August, in the year of our Lord one thousand eight hundred and forty-six.

EXHIBIT No. 4.—H. L. H., U. S. C.

A. D. 1841. No. 8874.

Preserving animal and vegetable substances and liquids.— Wertheimer's specification.

To all to whom these presents shall come:

I, John Wertheimer, of West street, Finsbury Circus, in the city of London, printer, send greeting.

Whereas her present most excellent Majesty, Queen Victoria, by her letters-patent under the great seal of Great Britain, bearing date at Westminster the eighth day of March, in the fourth year of her
151 reign, did, for herself, her heirs and successors, give and grant unto me, the said John Wertheimer, her especial license, full power, sole privilege and authority, that I, the said John Wertheimer, my ex'ors, adm'ors, and assigns, or such others as I, the said John Wertheimer, my ex'ors, adm'ors or assigns, should at any time agree with, and no others, from time to time, and at all times during the term of years therein expressed, should and lawfully might make, use, exercise and vend, within all her said Majesty's colonies and plantations abroad, and in the isles of Man, Jersey, Guernsey, Alderney, and Sark, the invention of "certain improvements in preserving animal and vegetable substances and liquids," communicated to me by a certain foreigner residing abroad; in which said letters-patent is contained a proviso that I, the said John Wertheimer, shall cause a particular description of the nature of the said invention, and in what manner the same is to be performed, to be enrolled in her said Majesty's high court of chancery, within six calendar months next and immediately after the date of the said in part recited letters-patent, as in and by the same, reference being thereunto had, will more fully and at large appear.

Now know ye, that in compliance with the said proviso, I, the said John Wertheimer, do hereby declare the nature of the said invention, and the manner in which the same is to be performed, are fully described and ascertained in and by the following statement thereof, (that is to say:)

The invention relates to that mode of preserving animal and vegetable substances and liquids where the matter to be preserved is placed in cases from which the atmospheric air is more or less driven off by heat, and thus obtaining a more or less perfect vacuum, and the invention consists of a mode of more readily and certainly obtaining a vacuum, and then closing the opening in the case by soldering; and it is well known that on the extent to which the atmosphere is driven

152 off, and subsequently excluded, depend the success of the process; and the length of time which provisions may be preserved, and, so far as I am informed on the subject, up to the time of granting my said letters-patent, there did not exist any mode of fully driving off the atmospheric air, and of soldering and positively closing the cases in which provisions were placed; and in order to give the best information in my power, I will proceed to explain the invention as practiced by me.

The cases in which the animal or vegetable substances, whether in the solid state or in the form of soups and liquid, are to be placed in cases, and as nearly as possible to fill them; the covers are then to be soldered on, and each of such covers having one or two small holes, the larger of which is to be about the one-eighth of an inch in diameter, the other much less, even as small as the fiftieth of an inch. The cases and covers I prefer to make of sheet iron or iron tinned, but do not confine myself thereto. The cases thus covered are with their contents to be heated by a fire or hot plate, or other convenient means, to a temperature of somewhat more than 212° of Fahrenheit, in order to insure the food being at the boiling-point. By this means the steam, which is driven off from the liquid which is in the provisions, will drive off the atmospheric air through the openings before mentioned; and in order to prevent the atmospheric air entering, I apply a ring of heat or flame around the openings, which prevents the air passing through the openings into the cases; at the same time the steam, with the air from the inside of the cases, can by the pressure within be driven out at the openings. In thus applying a ring of flame, I prefer to use gas, though I do no confine myself thereto; and in using gas, I have a ring or hoop-burner, having holes for jets all around the upper surface, and the under surface of the ring is covered with cotton or other soft material,

153 which, being kept damp and pressed against the surface of a case containing provisions, will not allow any air to pass under the burner, and I apply one such ring or hoop-burner to each hole in the case, in such manner that the hole is at or near the centre of the burner; and then, by pressing the burner on to the case or the case up under the burner, I make the same as air-tight as possible and ignite the gas; the steam and air from within continue to be forced through the holes and through the flame, which at the same time, owing to the interior of the flame having little air to supply combustion, will come together and form a hollow dome over the hole below, and thus most perfectly exclude the outer atmospheric air passing down through the flame.

It should be stated that the provisions are to be submitted to the process of heat for more or less time, depending on its nature, as heretofore, and according to the extent it is desired the same should be cooked; and the provisions, when meat or vegetables, may be put into the case in their natural state, or they may be first scalded. When the cooking has been carried on to the desired extent, and the operator is satisfied that all the atmospheric air which was in the provisions and in the case is fully driven off, which he will judge of by observing that the steam is coming off with considerable force, he will then proceed to solder up the holes, commencing by stopping the larger hole, and then the smaller one, keeping up the temperature during this process, in order to insure the boiling-point being maintained within the case, and that the pressure within may be such up to the last moment as to insure the driving off every portion of atmospheric air from within the case, for it is of the utmost consequence that every particle of atmospheric air should be drawn off; and I continue the heat for some minutes after the vessel

is hermetically closed, when only partially cooking. Having com-
154 pleted the process as above described, I allow the case to cool and stand till the next day, and then light the gas-burner around one of the openings, and unsolder that opening, by which means any air which may have remained on the food, which it is liable to do when only slightly cooked, will pass off and be consumed; the hole is again soldered, and the process complete. By this mode of insuring the driving off of the atmospheric air and of closing the holes air-tight, by the aid of the ring-burner, very large cases of meat or vegetable food may be preserved with certainty and for a great length of time. I sometimes, in place of using the burner at the opening through which the air is expelled, operate in the following manner: Having soldered on the cover of the case, I apply heat in order to expel the atmospheric air through the small hole or holes left, and having forced the air out as fully as I can by such means, I then solder up the small openings, but not having used the heat or flame at the openings, the vacuum will not be sufficient to preserve the provisions fully for a long time, and such process has been before resorted to, but without success; but this part of the invention, in having first driven off as much air as I can by heat, and having soldered up the small openings, I continue the process of heat from about ten to thirty minutes, according as the case is small or large; a small case, being under ten pounds, will not require more than ten minutes; by either of the above modes very large cases can be preserved with certainty, which is not the case with other modes before resorted to.

In applying heat to these purposes, I prefer to employ a fluid-bath in place of applying the dry heat of a hot plate or oven, which are difficult to so regulate the temperature as to keep all parts equally heated and prevent burning; and I use a solution of muriate of lime or of nitrate
of soda, preferring muriate of lime, for by such means I am enabled
155 to obtain a constant temperature of two hundred and seventy to two hundred and eighty of , without material evaporation. And I place such solution in a trough of a depth somewhat less than the vessels or cases containing the provisions, and by putting such cases into such liquid and keeping the liquid heated by steam-pipes or otherwise, a constant and equitable temperature may be obtained, and no burning can take place. I would remark that I am aware that baths of a similar description have been used for other purposes. I do not, therefore, claim their use generally, but only when applied to the purposes of heating vessels or cases containing provisions to be preserved by closing them air-tight.

Having thus described the invention, I would have it understood that I am aware that the driving off air from cases by heat has been done before in preserving vegetable and animal matters in cases, but in such instances it has been thought absolutely necessary to remove the case from heat, and allow the contents to cool before soldering up the opening. Now it is peculiar to this process, and of the greatest importance, that the opening should be closed, in opposition to the pressure within the case caused by the heat. By such means the vacuum is insured. In the former process they could not obtain a vacuum, owing to the cooling down before soldering up the orifice. In performing this invention the heat is continued during the driving off of the air, also when soldering up the opening, and for some time after soldering, thus avoiding that process of cooling heretofore considered necessary. But what I claim as the invention is—

First, the mode of employing a burner for excluding the atmosphere,

and for closing the openings of cases wherein animal and vegetable substances and liquids produced therefrom are to be preserved, as above described.

156 Secondly, I claim the mode of preserving animal and vegetable matters in closed cases, by expelling as much air as I can by means of heat, then closing the opening during the heating process, and continuing the heat after closing for a time, in order to decompose the remaining atmospheric air;

And thirdly, I claim the application of the fluid baths, as herein described.

In witness whereof the said John Wertheimer have hereunto set his hand and seal this eighth day of September, in the year of our Lord one thousand eight hundred and forty-one.

JOHN [L. S.] WERTHEIMER.

And be it remembered that, on the eighth day of September, in the year of our Lord 1841, the aforesaid John Wertheimer came before our said lady the Queen, in her chancery, and acknowledged the specification aforesaid, and all and everything therein contained and specified, in form above written, and also the specification aforesaid was stamped according to the tenor of the statute made for that purpose.

Inrolled the eighth day of September, in the year of our Lord one thousand eight hundred and forty-one.

EVIDENCE OF RESPONDENT.

Application of Isaac Winslow.

The United States Patent-Office to all persons to whom these presents shall come, greeting:

This is to certify that the annexed is a true copy, from the files of this office, of the file, wrapper, and contents in the matter of the letters-patent granted John W. Jones, dated April 8, 1862, No. 34,928, for "Method of preserving green corn."

157 In testimony whereof, I, Samuel A. Duncan, acting Commissioner of Patents, have caused the seal of the Patent-Office to be hereunto affixed, this eighth day of April, in the year of our Lord one thousand eight hundred and seventy-one, and of the Independence of the United States the ninety-fifth.

SAMUEL A. DUNCAN,
Acting Commissioner.

Petition.

To the Commissioner of Patents:

The petition of Isaac Winslow, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, respectfully represents:

That your petitioner has invented a new and useful improvement in preserving Indian corn, which he verily believes has not been known or used prior to the invention thereof by your petitioner. He therefore prays that letters-patent of the United States may be granted to him therefor, vesting in him and his legal representatives the exclusive right to the same, upon the terms and conditions expressed in the act of Congress in that case made and provided; he having paid thirty dollars

into the Treasury, and complied with the other provisions of the said act.

And Dr. Daniel Breed, of Washington, D. C., is hereby appointed my attorney, with full power to exercise, by substitution or otherwise, all the rights to which I would personally be entitled, in regard to my within application for letters-patent, including the receipt of the patent and the withdrawal of the application.

ISAAC WINSLOW.
J. W. JONES, *Assignee.*
WM. HINKLE.
WILLIAMS OGLE.
G. GWYNN.
A. W. WHITMORE.

158 *Affirmation.*

STATE OF PENNSYLVANIA,
County of Philadelphia and city of same, ss:

On this eighteenth day of February, 1862, before me, the subscriber, an alderman, ex officio justice of the peace, for the city of Philadelphia, personally appeared the within-named Isaac Winslow, and made solemn affirmation that he verily believes himself to be the original and first inventor of the new article of manufacture, or preserved Indian corn, herein described, and rejected November 19, 1853; and that he does not know or believe the same was ever before known or used; and that he is a citizen of the United States; and also that the original papers are lost, and the accompanying specification is substantially the same as the one originally filed in the Patent-Office for the purpose of obtaining letters-patent for the within-described invention or article of manufacture.

WILLIAMS OGLE, *Alderman.*

Specification.

To all whom it may concern:

Be it known that I, Isaac Winslow, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful improvement in preserving Indian corn in the green state, and I do hereby declare that the following is a full and exact description thereof:

In my first attempts to preserve Indian corn in the green state, without drying the same, I did not remove the kernels from the cob. The article thus obtained was very bulky, and when used the peculiar sweetness was lost, the same being absorbed, as I suppose, by the cob. After a great variety of experiments, I have overcome the difficulties of
159 preserving Indian corn in the green state without drying the same, thus retaining the milk and other juices, and the full flavor of fresh green corn until the latter is desired for use. Instead of a hard, insipid, or otherwise unpalatable article, I have finally succeeded in producing an entirely satisfactory article of manufacture, in which my invention consists.

I have employed several methods of treatment of the green corn with good results. My first success was obtained by the following process. The kernels being removed from the cob, were immediately packed in cans, and the latter hermetically sealed so as to prevent the escape of the natural aroma of the corn, or the evaporation of the milk or other

juices of the same; then I submitted the sealed cans and their contents to boiling or steam heat about four hours. In this way the milk and other juices of the corn are coagulated, so far as may be by boiling, thus preventing the putrefaction of these more easily destructible constituents. At the same time, the milk and other juices are neither diluted nor washed away, as would be more or less the case if the kernels were mixed with water and boiled. By this method of cooking green corn in the vapor of its juices, as it were, the ends of the sealed cans are bulged out, as though putrefaction and the escape of resultant gases had commenced within the cans. Consequently, strong cans are required and dealers are likely to be prejudiced against corn thus put up.

I recommend the following method: select a superior quality of sweet corn in the green state and remove the kernels from the cob by means of a curved and gauged knife or other suitable means. Then pack these kernels in cans and hermetically seal the latter, so as to prevent evaporation under heat, or the escape of the aroma of the corn. Now expose these cans of corn to steam or boiling heat for about one hour
160 and a half; then puncture the cans and immediately seal the same while hot; and continue the heat for about two hours and a half longer. Afterwards the cans may be slowly cooled in a room at the temperature of 70° to 100° Fah.

Indian corn thus packed and treated may be warranted to keep in any climate. Being preserved in its natural state, as near as possible, it retains the peculiar sweetness and flavor of fresh corn right from the growing-field. It is only necessary to heat this preserved corn and season the same in order to prepare it for the table, as it is fully cooked in process of preserving.

Other modes of treatment may be adopted without departing from my invention, so long as the hermetical sealing and the use of heat are so managed as to secure the aroma and fresh flavor and prevent putrefaction, thus producing the new article of manufacture substantially as described.

Having thus fully described my invention, what I claim and desire to secure by letters-patent of the United States is:

The above-described new article of manufacture, namely, Indian corn when preserved in the green state without drying the same, the kernels being removed from the cob, hermetically sealed and heated substantially in the manner and for the purposes set forth.

ISAAC WINSLOW.

Witnesses:
WM. HINKLE,
WILLIAMS OGLE.

PHILADELPHIA, *March*, 1853.

To the Commissioner of Patents:

The petition of Isaac Winslow, of the city and county of Philadelphia and State of Pennsylvania, respectfully represents:

161 That your petitioner has invented a new and improved mode of preserving green corn, which he verily believes has not been known or used prior to the invention thereof by your petitioner. He therefore prays that letters-patent of the United States may be granted to him therefor, vesting in him and his legal representatives the exclusive right to the same, upon the terms and conditions in that case made and provided as expressed in the act of Congress; he having

paid thirty dollars into the Treasury and complied with the other provisions of said act.

ISAAC WINSLOW.

To the COMMISSIONER OF PATENTS, *Washington.*

In the case of your application for a patent for a method of preserving green corn, all the part of the specification referring to your first claim, is neither illustrated by drawings and models, nor have you sent any specimens of green corn preserved by your process. The specification is therefore returned to you with a guide, leaving it at your option to supply the deficiency or to modify your claim.

ISAAC WINSLOW, *Phila., Pa.*

(Endorsement:) 1 August, 1853.

28 SEPTEMBER, '53.

Enclosed you will receive the official letter of Aug. 1, 1853, in relation to your case of preserving green corn. The street and number having been omitted in directing the above communication, it has now come back as a dead letter.

ISAAC WINSLOW,
148 *S. Fourth St., Phila., Penn.*

162 WASHINGTON, *Oct.* 26, 1853.

To the Commissioner of Patents:

RESPECTED SIR: I have this day deposited at the Patent-Office additional drawings, model and samples, relative to my application for a patent to preserve green corn, adding the necessary information (to correspond therewith) to the specification, and shall feel much obliged by as early attention to it as convenient, as business calls me to Europe and I feel very anxious to close this business before leaving the country. I intend remaining at "Beer's Temperance House" for some days, and shall wait on you at any time when called for.

Very respectfully, yours, &c.,

ISAAC WINSLOW.

WASHINGTON, D. C., *Nov.* 1, 1853.
(At Beer's Temperance Hotel.)

To the Commissioner of Patents:

RESPECTED SIR: Should a patent for preserving green corn be granted me, I should be much pleased to have it antedated six months, as my application was made March 8, 1853.

Very respectfully, yours, &c.,

ISAAC WINSLOW.

(Endorsement:) I. Winslow. Filed Nov. 4, '53. Daniel Breed.

NOVEMBER 2, 1853.

In your application for a patent for preserving green corn, this Office regards the operation of cutting the corn from the cob as no part of the process of preserving; therefore you will decide which part of your application shall be examined under the fee already paid—
163 whether the process of preserving or that of removing the corn from the cob. Your specifications are enclosed.

I. WINSLOW,
148 *S. Fourth St., Phila., Penn.*

PHILADELPHIA, *Nov.* 4, 1853.

To the Commissioner of Patents:

RESPECTED SIR: Enclosed please to find my specification for preserving green corn returned with an amendment, wholly striking out my second claim, which I have no doubt will enable the Office to decide favorably on my claim. The first letter from the Office was directed to Joshua Winslow; the second was directed properly on the envelope, but inside turned up Joshua Winslow; the last, Nov. 2d, was directed to S. R. Winslow on the outside, and to I. R. Winslow on the inside, and nothing but the number and street prevented it from being returned among the dead letters. I know not where all these names come from, for in all my communications to the Office, I have subscribed myself as I now do, yours, very respectfully and truly,

ISAAC WINSLOW,
148 *South 4th Street, Phila.*

P. S.—I mention these mistakes for fear of their being repeated from some cause which I cannot comprehend, and which may be very injurious to me if it occurs about the time I am leaving for Europe.

I. W.

N. B.—Absence from the city prevented an earlier reply.

(Endorsed:) I. Winslow. Filed 7 Nov., '53. Daniel Breed.

164 NOVEMBER 19, 1853.

Your application for letters-patent for preserving green corn has been duly examined, and this Office is of the opinion that your process is substantially the same as that in common use for preserving both vegetable substances and animal. You are referred to McKenzie's Five Thousand Receipts, Philadelphia edition, page 394. If you regard the "vent" of special moment, you may be informed that this is a common resort, especially on the continent of Europe, when it is desired to preserve the flavor of vegetables. An old method equivalent to yours has been to tie a piece of bladder over the mouth of the bottle. The cook then pricks a pin-hole through the membrane when necessary, and immediately after the steam escapes she binds on an additional layer of bladder.

ISAAC WINSLOW,
148 *S. Fourth St., Phila., Penn.*

Dictated by G. Reg. 19-11-53.

No. 34928.

Isaac Winslow, (assignor to John W. Jones, of Portland, Maine,) of Philadelphia, county of Philadelphia, State of Pennsylvania.
Oath renewed.

METHOD OF PRESERVING GREEN CORN.

	Received	March 8, 1853.	
	Petition,	" " "	
	Affidavit,	" " "	
165	Specification,	March 8, 1853.	
	2. Drawings,	" " "	Not required.
	Model,	" " "	

Cert. dep.
1. Cash, $30, " " "
Examined. B. S. Hedrick, March 21, 1853.
2. Issue, Hayes, March 27, 1862.
4. Patented April 8, 1862.
Recorded, vol. 139, page 265.
148 S. Fourth Street, Philadelphia, Penn.
Specification returned, 1 August, '53.
Received as dead letter and remailed with new letter, 28 September, '53.
Specification returned for division, 2 Nov., '53.
Rejected 19 Nov., '53.
Spec. & 2 drs. to me Aug. 2, 1854.
Exd. A. H. M. ISAAC WINSLOW.
(Endorsed :) Improved "Indian corn preserved green."

Durand specification.

The United States Patent-Office to all persons to whom these presents shall come, greeting:

This is to certify that the annexed is a true copy from the bound volumes of the library of this Office, of the specification in the matter of the English letters-patent granted Peter Durand, dated Aug. 25, 1810, No. 3372, for "preserving animal and vegetable food."

In testimony whereof I, Samuel A. Duncan, Acting Commissioner of Patents, have caused the seal of the Patent-Office to be here-
166 unto affixed, this eighth day of April, in the year of our Lord one thousand eight hundred and seventy-one, and of the Independence of the United States the ninety-fifth.

SAMUEL A. DUNCAN,
Acting Commissioner.

A. D. 1810.] [No. 3372.

Preserving animal and vegetable food.—Durand's specification.

To all to whom these presents shall come:

I, Peter Durand, of Hoxton Square, in the county of Middlesex, merchant, send greeting:

Whereas His Most Excellent Majesty, King George the Third, did, by his letters-patent, under the great seal of the United Kingdom of Great Britain and Ireland, bearing date at Westminster, the twenty-fifth day of August, in the fiftieth year of his reign, give and grant unto me, the said Peter Durand, my exors., admors., and assigns, his especial license, full power, sole privilege, and authority, that I, the said Peter Durand, my exors., admors., and assigns, during the term of years therein mentioned, should and lawfully might make, use, exercise, and vend, within England, Wales, and the town of Berwick-upon-Tweed, an invention communicated to him by a certain foreigner, residing abroad, of the "method of preserving animal food, vegetable food, and other perishable articles a long time from perishing or becoming useless," in which said letters-patent there is contained a proviso obliging me, the said Peter Durand, by an instrument in writing under my hand and

seal, to cause a particular description of the nature of the said invention, and in what manner the same is to be performed, to be enrolled in His Majesty's high court of chancery within six calendar months after the date of the said letters-patent, as in and by the same,
167 relation being thereunto had, may more fully and at large appear.

Now know ye that, in compliance with the said proviso, I, the said Peter Durand, do hereby declare that the nature of the said invention, and the manner in which the same is to be performed, are particularly described and ascertained as follows, that is to say—

First, I place and inclose the said food or articles in bottles or other vessels of glass, pottery, tin, or other metals or fit materials; and I do close the aperture of such containing-vessels, so as completely to cut off and exclude all communication with the external air; and as to the method of closing, I do avail myself of the usual means of corking, airing, luting, or cementing, and in large vessels I make use of corks, formed of pieces glued together in such a manner as that the pores of that substance shall be in a cross direction with regard to the aperture into which such cocks are to be driven; and I do also, in such vessels as may admit of or require the same, make use of stoppers fitted or ground with emery, or screw-caps, with or without a ring of leather or other soft substance between the faces of closure, and also of cocks or cross-plugs or covers of leather, cloth, parchment, bladder, and the like.

Secondly, when the vessels have been thus charged and well closed, I do place them in a boiler, each separately surrounded with straw or wrapped in coarse cloth, or otherwise defended from striking against each other, and I fill the said boiler so as to cover the vessel with cold water, which I gradually heat to boiling, and continue the ebullition for a certain time, which must depend upon the nature of the substances included in the vessels, and the size of the said vessels, and other obvious circumstances, which will be easily apprehended by the operator without further instruction. Vegetable substances are to be put
168 into the vessel in the raw or crude state, and animal substances partly or half cooked, although these may also be put in raw. The food or other articles thus prepared may be kept for a very long time in a state fit for use, care being taken that the vessel shall not be opened until their said contents shall be wanted for consumption.

And, lastly, I do declare that although the application of the water-bath, as hereinbefore described, may be the most commodious and convenient, I do likewise avail myself of the application of heat, by placing the said vessels in an oven, or a stove, or a steam-bath, or any other fit situation for gradually and uniformly raising the temperature of the same, and suffering them to cool again; and, further, that I do, as the choice of the consumer or the nature of the said food or other article may render preferable, leave the aperture of the vessel, or a small portion thereof, open until the effect of the heat shall have taken place, at which period I close the same.

In witness whereof I, the said Peter Durand, have hereunto set my hand and seal the thirtieth day of August, in the year of our Lord one thousand eight hundred and ten.

[L. S.] PETER DURAND.

And be it remembered that, on the thirtieth day of August, in the year of our Lord 1810, the aforesaid Peter Durand came before our said lord the King in his chancery, and acknowledged the specification aforesaid, and all and everything therein contained and specified, in form

above written. And also the specification aforesaid was stampt according to the tenor of the statute made for that purpose.

Inrolled the thirtieth day of August, in the year of our Lord one thousand eight hundred and ten.

Exd., M. A.

169 *Gunter specification.*

The United States Patent-Office, to all persons to whom these presents shall come, greeting:

This is to certify, that the annexed is a true copy, from the bound volumes of the library of this Office, of the English specification in the matter of the letters-patent granted Henry Gunter, dated Jan. 6, 1841, No. 8776, for improvements in "preserving animal and vegetable substances."

In testimony whereof I, Samuel A. Duncan, Acting Commissioner of Patents, have caused the seal of the Patent-Office to be hereunto affixed, this eighth day of April, in the year of our Lord one thousand eight hundred and seventy-one, and of the Independence of the United States the ninety-fifth.

SAMUEL A. DUNCAN,
Acting Commissioner.

A. D. 1841.] [No. 8776

Preserving animal and vegetable substances.—Gunter's specification.

To all to whom these presents shall come:

I, Henry Gunter, of Cullum street, Ten-church street, in the city of London, merchant, send greeting:

Whereas her present most Excellent Majesty, Queen Victoria, by her letters-patent, under the great seal of Great Britain, bearing date at Westminster, the sixth day of January, in the fourth year of her reign, did for herself, her heirs and successors, give and grant unto me, the said Henry Gunter, her especial license, full power, sole privilege
170 and authority, that I, the said Henry Gunter, my exors., admors., and assigns, or such others as I, the said Henry Gunter, my exors., admors., or assigns, should at any time agree with, and no others, from time to time and at all times during the term of years therein expressed, should and lawfully might make, use, exercise, and vend, within all her said Majesty's colonies and plantations abroad, my invention of "improvements in preserving animal and vegetable substances;" in which said letters-patent is contained a proviso that I, the said Henry Gunter, shall cause a particular description of the nature of my said invention, and in what manner the same is to be performed, to be inrolled in her said Majesty's high court of chancery, within six calendar months next and immediately after the date of the said in part recited letters-patent, as in and by the same, reference being thereunto had, will more fully and large appear.

Now know ye that, in compliance with the said proviso, I, the said Henry Gunter, do hereby declare that the nature of my invention, and the manner in which the same is to be performed, are fully described and ascertained in and by the following statement thereof, (that is to say:)

My invention relates to a mode of treating animal and vegetable substances in cases or vessels by heat, and thus cooking, or partially cook-

ing, the same, and driving off the atmospheric air contained therein, whereby the animal and vegetable substances so treated may be preserved for a great length of time in a fresh and pure state and retain their natural flavor. And in order to give the best information in my power, I will proceed to describe the process as pursued by me.

I employ (by preference) vessels or cases of tin, and of a cylindrical or other convenient form, such vessels each having one end fixed, and into these vessels I place such animal substances as I may desire to preserve, having first scalded them. I then solder on the other end of each
171 vessel, so that the vessel will be hermetically closed, having in filling allowed a small quantity of room in each vessel to permit the substance therein to swell. I then place a number of such vessels into a large boiler, and cover them with water and close the boiler, and cause the water therein to boil freely, but retaining it about two hundred and twelve degrees of Fahrenheit, and continue such boiling for about two hours and a half for animal matter, and from fifteen to twenty-five minutes for vegetable matter. I then take out such vessels, and on examination, if they show no unsoundness, I place them in a hot sand-bath, or other convenient means of applying heat, so as to leave the upper end uncovered; and I puncture therein a minute hole, and heat being kept up to ensure its being about two hundred and twelve degrees of Fahrenheit, the air in the case or vessel will be driven out with the steam, and when it is seen that the steam is coming very freely I close the minute hole by a soldering-iron whilst the steam is flowing off, and in opposition thereto. The process will then be complete. And it may be remarked, that by pursuing this process great advantages will be derived, as it will be evident that by causing the process of heat to be carried on during the time the vessel is hermetically closed all the flavor of the substances treated will be retained, and the vessels will only be open so long as simply to allow of the air being driven off, from which circumstance the animal and vegetable substances will be preserved in the most advantageous manner.

And, in conclusion, I may remark that although I have been thus particular in describing the exact means pursued by me, I do not confine myself thereto, so long as the mode herein described be retained, and I am aware that animal and vegetable matters may be preserved by simply placing them in such vessels as herein described and
172 closing them therein; but in place of having them hermetically sealed, when undergoing the process of heat to cook, or partially cook, the same, to have a minute hole or holes in the cover, and allow the vapors to flow off during the whole time of applying heat, and then closing such vessels when the substances are cooked to the extent desired; but I do not consider such process nearly so advantageous as that above described, as much of the flavor of the animal or vegetable substance or substances by the latter means would be driven off; whereas, in the former processes, the same are retained, as the cooking goes on during the time the vessel is hermetically closed.

In witness whereof I, the said Henry Gunter, having hereunto set my hand and seal, this thirteenth day of January, in the year of our Lord one thousand eight hundred and forty-one.

[L. S.] HENRY GUNTER.

And be it remembered that, on the thirteenth day of January, in the year of our Lord 1841, the aforesaid Henry Gunter came before our said Lady, the Queen, in her chancery, and acknowledged the
Lynch. specification aforesaid, and all and everything therein con-

tained and specified, in form above written, and also the specification aforesaid was stamped according to the tenor of the statute made for that purpose.

Inrolled the sixth day of July, in the year of our Lord one thousand eight hundred and forty-one.

Ex'd, T. L. T.

173 *Deposition of Louis Bertram for respondent, taken May 2, 1871.*

Int. 1. Where were you born, where have you lived, and if in more than one country about how long in each, and what is your age?

Int. 2. State whether or not you are acquainted with the art of manufacturing hermetically-sealed goods, and if yea, when you learned the art and have worked at it, and how long about in each, if more than one country.

Int. 3. Will you describe particularly the art as learned and practiced by you, if at all, in France and in this country? And state whether or not said art was applied to vegetables as well as meats in effecting their preservation for use as human food, and with what success, and to what kind of vegetables, and whether or not to said vegetables in their natural or raw state.

Int. 4. In the practice of said art in France, if at all, was the probing or venting of the hermetically-sealed vessels containing the goods deemed necessary to the success of the art, or is it by you as now practiced?

(Objected to because witness is not expert, and the question calls for hearsay testimony.)

Int. 5. Have you given an affidavit in the preliminary hearing of the above-entitled (now on file in this) cause, and is the same true, and will you append the same to this deposition?

Cross-interrogatories propounded to J. Louis R. Bertram, witness for the respondents in the above case, by Wm. H. Clifford, attorney for complainants.

Int. 1. Have you ever yourself practiced the preservation of green corn in hermetically-sealed cans as a business; and, if yea, how
174 much corn have you thus packed, where did you pack it, what was the exact process you pursued, and what did you do with the same after it was preserved?

Int. 2. Can you successfully treat green corn, in preserving the same, in the same manner and by the same process that you can artichokes, cabbage, fish, carrots, turnips, &c.?

Int. 3. State particularly the kind of glass vessels and other vessels you used when you preserved articles of food in Cologne in 1826–9, and also what in Paris.

Int. 4. State the exact process pursued by you in preserving articles of food in Paris. State all the steps minutely.

Int. 5. If you removed the cover of the vessels containing the articles of food, state why you so did, and state of what the said covers were made.

Int. 6. State where and when you first saw cans of green corn preserved, and what, if any, marks or labels were on the same.

Int. 7. State the process you now pursue in the preservation of meats, fruits, and vegetables.

Int. 8. Have you not given an affidavit in this case, dated April 6, 1870, and will you not append the same or a copy thereof to this deposition?

JEAN LOUIS R. BERTRAM, of New York City, aged 62 years, being duly and publicly sworn and examined on the part of the respondent, deposes and says as follows:

In answer to the first interrogatory he saith: I was born in Langenberg, Prussia. I was three years learning my business in Cologne, Prussia. Then I went to Paris. I lived there five years. Then I went to Sedan, and lived there for eighteen years. Then I came to this country, in 1853, and have lived here ever since. My age is 62 years.

175 In answer to the second interrogatory he saith: I am acquainted with the art of manufacturing hermetically-sealed goods. I learned it in Cologne, Prussia, about the year 1826. I worked at it in Paris for five years after leaving Cologne; then I went in business for myself in Sedan, France, in this same business; then I came over to this country in 1853, and have been working in the business of hermetically-sealed goods ever since.

In answer to the third interrogatory he says: In France we put all fruits and vegetables raw in cans; then we sealed them and cooked them in the cans. The vegetables were cooked longer than the fruit. Vegetables we cooked sometimes three hours and sometimes four hours; fruits fifteen, twenty, and twenty-five minutes; meats three and four hours. We commenced with asparagus; little peas, string beans, Lima beans, little carrots, corn, wheat, &c., were all preserved in the way I have stated. These vegetables were all put in the cans raw and cooked afterwards. The method I used was always successful. I never lost a can. I used the same method in this country ever since I have been here, and with like success. In putting up tomatoes I peel them and put them raw in cans; then I boil them in the can for about half an hour. I have a great demand for tomatoes put up in this way.

In answer to the fourth interrogatory he says: In the practice of said art in France, the probing or venting of the hermetically-sealed cans containing goods, was deemed necessary for the success of the art. I have always done it since I commenced the business, and deem it necessary for the success of the goods.

To the fifth interrogatory he saith: I have made an affidavit in
176 this case on the preliminary hearing, and believe it is now on file in the case. The same is true, and it may be appended to this deposition.

To the first cross-interrogatory he saith: I have practiced the preservation of green corn in hermetically-sealed cans as a business. I have packed great quantities of it, but cannot tell how much. I packed some green corn in France, but not a great quantity there, but packed a good deal of green corn in this country. In France we picked the corn, took it from off the cob, put them in cans right away, pressed them into cans very tight, then sealed the cans up, and put the cans in the water and boiled them for three hours; then we labelled the cans, put them in cases and sold them. I use the same process in this country as I have described above.

To the second cross-interrogatory he saith: I used the same process in preserving artichokes, cabbage, fish, carrots, turnips, &c., in the same manner as I do green corn, and with great success; fish I do not boil so long; fish we boil for ten or fifteen minutes only.

To the third cross-interrogatory he saith: We used all kinds of vessels in Cologne; wine-bottles, fruit-bottles, jars, all kinds of glass vessels; then sealed the mouths up. In Paris, we done the same; used all kinds

of glass vessels and cans; we also used cans in Cologne, during the years stated in the interrogatory.

To the fourth cross-interrogatory he saith: The process we use is a secret, and I decline to answer the interrogatory on that ground.

To the fifth cross-interrogatory he saith: I did not remove the cover of the vessels containing articles of food, except in fruit, when we
177 made a little hole in the cover after the articles were cooked to let the air out. The covers were made of tin; when we used glass vessels the covers were made sometimes of tin and sometimes of cork.

To the sixth cross-interrogatory he saith: I first saw green corn preserved in cans in Cologne, Prussia. I don't now remember the marks or labels on the same.

To the seventh cross-interrogatory he saith: It is a secret with me, and I decline to answer the question on that ground.

To the eighth cross-interrogatory he saith: I did make an affidavit about that time. I cannot attach the affidavit or a copy of it, as I have not seen it since I made it. I suppose it is on file in this case.

JEAN LOUIS RISIOLI BERTRAM.

Agreement to use affidavits.

Circuit court of the United States, district of Maine.

JOHN W. JONES ET ALS. }
v. }
HENRY CLARK. }

We, the undersigned, counsel in the above-entitled cause, hereby agree that the accompanying affidavits and cross affidavits shall go into the case in the final hearing, and that no other affidavits or depositions of the said Provost's testimony shall be taken in said cause, and that said Provost shall not be further examined, and that the accom-
178 panying affidavits and cross affidavits shall be used at said hearing instead of further direct and cross examination of said witness.

BRADBURY & BRADBURY, *for Defendant.*
WM. HENRY CLIFFORD, *for Plaintiffs.*

Affidavit of Isaac Reckhow, for respondent, taken originally in another suit, May 28, 1870.

I reside in Brooklyn, State of New York. I am in the preserving and pickling business. I was packing lobsters on Bangs' Island, opposite Portland, in the summer of 1849. I left in August, 1849, and came to New York. I then put up 6 or 8 or 10 dozen cans of corn, which I sold to Cleveland & Taylor, of New York City. This was shipped to California. I packed about the same quantity, more or less, the next year, and continued this for several years. The corn I sold to Cleveland & Taylor in 1849 was shipped by them to California by the schooner Anthon.

ISAAC RECKHOW.

Affidavit of William H. Hudson, taken May 30, 1870.

I reside at Long Island City, on Long Island, New York State. Am a preserver, engaged in putting up fruits and vegetables in cans. I

commenced this business about 1851. In April or May I went to Portland, and remained there about three months the first season,
179 and worked for Rumery & Burnham in their canning-establishment. I returned to New York in the latter part of the summer, and the next spring went back to them again, and worked for the same firm, and remained till April, 1856. In both the years 1854 and 1855 we were packing lobsters, peas, and some corn. This was the first corn I ever saw packed. I came to New York in the spring of 1856 and engaged with S. Dayton, of New York, in the preserving business. In January, 1864, I went into company with Isaac Reckhow. The style of the firm was Reckhow & Hudson, and our place of business was at 144 Liberty street, and our factory at Hunter's Point. Reckhow never told me while I was with him that he had ever packed any corn. This part of the business was left to me, as I gained a knowledge of it in Portland. In the year 1864, while with Reckhow, we packed five or six hundred dozen of corn. We cut it off the cob and filled the cans in a raw state, sealed it and bathed it, venting it after bathing it. About one-third of this corn spoiled.

WM. H. HUDSON.

Affidavit of James P. Baxter, taken June 3, 1870.

Being in New York May 28, 1870, I made inquiries of several persons for one Isaac Reckhow, who had made an affidavit for the defendants in the case J. W. Jones and als. v. H. Clark and als. I was told by W. H. Dudley and others, of whom I made inquiries, that Reckhow was not a man whose word could be relied upon. I found Reckhow in Jay street, and introduced myself to him, stating that I called to see him about an affidavit in a corn case. He became quite violent, and began de-
180 nouncing and ridiculing the patents. He asked me if I knew George Burnham. I told him I did. He said he would help George all he could. He talked quite freely, saying that he was the "inwentor" of hermetically-sealed goods in this country, and could blow the patents sky-high. He said that he inwented tin-cans. I asked him how he first came to know about corn-packing. He said that he "inwented" it. He also said that he was engaged in packing lobsters in vinegar on Bangs' Island, in Portland Harbor, during the summer of 1849, and was often in Lewis's canning-establishment in Portland; that he left Portland in August, 1849, and went to New York, and there packed six or eight dozen corn in cans, perhaps a few dozen more or less than this, which he sold to Cleveland & Taylor, who shipped it to California on the schooner Anthon; that he got a good deal of credit for it, as the Herald published a lengthy account of it, which I could see by going to the Herald office and looking at the files for 1849. He said that he did not make a business of packing corn, and only packed a few dozen each year for several years after '49. He made conflicting statements, saying that it was 1859 that he sold to Cleveland & Taylor. He said twice that it was 1859. I had him subpœnaed, and he made the deposition now on file in the court under date of May 28.

Subsequently I had a further conversation with him. He said that he might have been mistaken about the corn being shipped by the Anthon. I asked him about the Herald report he had spoken of, as I should like to see it. He said that he did not know that there was any report, as he went south in the fall of '49, but supposed the sailing of the vessel would be reported; that he did not know that she sailed in '49. I asked him if she sailed in '50. He said he did not know; it was

so far back it was difficult to remember dates. I asked him where I could find Cleveland & Taylor. He said there was no firm by the
181 name of Cleveland & Taylor; that Taylor was a friend of his, to whom he lent money; and then said that it was not money, but goods he lent him to the value of about five hundred dollars, which included the corn alluded to. He said Cleveland was one of the owners of the vessel. He said he did not care if the patentees stopped people from packing in Maine, as long as he could pack in New York, which he meant to do, patents or no patents.

JAMES P. BAXTER.

Second affidavit of Isaac Reckhow, taken for this suit, April 6, 1870.

ISAAC RECKHOW, of Brooklyn, Kings Co., State of New York, on oath, depose and say:

I am fifty years of age, and a manufacturer of hermetically-sealed goods, and began the business in 1837, at 102 Barclay street, New York.

In 1841 I obtained some French goods, apricots, peaches, strawberries, &c., put up in glass vessels, said to have been hermetically preserved in their own juices.

I then conceived the idea of preserving our native fruits in their season; went into market and bought berries as they came in; put them up in stout oil-bottles with a light sugar syrup; corked up the bottles tight and fastened down the corks with wire, when I placed the bottles into kettles of water with their tops out, and raised the water to boiling-heat for some twenty-five minutes. I then took the bottles out and set them away, and found they would keep, and did so keep, for years. In 1842 I put up pineapples and shipped to France, and had glass vessels constructed for this purpose.

182 In 1849, by experiment, I went into the use of tin cans of from one to two and one-half pounds.

Prior to 1849 I put up corn in glass vessels, by steaming the corn on the cob, and then filling it into vessels and sealing up the vessels air-tight. Continued this process for one year; and in 1849 I took the corn in its green and milky state, cut the kernels off raw, and packed the same into one-lb. tin cans, without water; soldered down the cap on top of the cans, to make them air-tight. I then put the cans into boiling water for two hours; removed them from the bath, and pricked a hole in the head of each can, so that the air rushed out; restopped the punctured cans with solder, and returned them to the boiling water, under a quick fire for two hours or more, when I immersed them in a bath of cold water, which contracted the cans, and the heads became concave.

The corn I put up in 1849 was sold to Cleveland & Taylor. In 1850 same firm sent me an order for more, about twenty dozen cans. By the same process I put up clams, oysters, parsnips and other vegetables, and continued to put up more or less canned corn from that date to 1868, in which year I put up for John E. Costignay from three to four hundred (3 to 400) dozen cans, and then went out of the business. I often found on the market in New York the long, swell-headed canned corn of Winslow, and also that of Aaron Ring and other Maine preservers of green corn. I never heard that any one in this country had or claimed any exclusive right or interest in the process of preserving green corn, or met with any notice to that effect, or ever have been prohibited from using the above or any other process of preserving corn in its green state, or vending the same.

ISAAC RECKHOW.

183 *Affidavit of Louis Bernard.—Taken April 6, 1870.*

I, LOUIS BERNARD, now of the State, city, and county of New York, on oath, depose and say:

I was born in what is called the Commune de Plaintain, near Metz, in France, in 1800, and for twenty years resided in Paris. I came to the city of New York in 1837, and am a manufacturer of hermetically-preserved goods. I knew Mons. Appert in France, and under his process learned the art of hermetically preserving vegetables and fruits. In 1842 I began the manufacture and trade in hermetically-sealed goods, fruits, and vegetables in the United States and in this city, and here have continued the business till now.

I am especially engaged in preserving delicately-flavored and juicy fruits, such as strawberries, raspberries, currants, peaches, pie-plants, and all pie-fruits, with tomatoes. These fruits and berries we pack into glass or tin vessels, in their natural state, and raw, without water or syrup. I then make the vessels air-tight; put them into boiling water and cook in their own juices a sufficient time for preservation. I never vent or puncture the vessels, but remove the vessels from the hot bath, and put away for use. In packing fruits unripe and hard, I sometimes pierce the cans, and in preserving pineapples I reseal or stop the punctured heads and recook, though it is not always necessary. I have on hand in my stock of goods peaches so put up seventeen years ago, now in good state.

The above business, by the process above described, I have pursued in this city during the entire period since 1842. I never have been forbidden or had any notice that any one had any exclusive right or interest in the same.

LOUIS BERNARD.

184 *Affidavit of Stephen H. Provost.—Taken May 7, 1870.*

I, STEPHEN H. PROVOST, of the city, county, and State of New York, aged forty-eight years, on oath depose, testify, and say:

I am a manufacturer of hermetically-sealed goods, and have been engaged in the business since 1846. At this time I was a member of the late firm of Wells, Mellen & Provost, of the city of New York, and employed a French workman in the art of hermetical sealing, named Ralf, of the city of Paris, who aided us here in the preservation of fruits, vegetables, &c., for this market, by the French process, the peculiar feature of which was the preservation of perishable articles for human food in hermetically-sealed vessels, by hot bathing, without venting the cans or vessels.

In 1848 or '9, we found corn preserved green in market for sale, and about this time we had a consignment for sale on commission, two or three casks of the "Winslow corn," so called; since which I have had and dealt in said corn, at various times, up to the present, both from "Nathan Winslow" in his life-time, and John W. Jones since; and during all this time and in all my transactions in this article, I have never been informed or notified, by either Winslow or Jones, that there was any peculiar process, or exclusive and private right, in the mode of preserving said corn, or in the use and sale thereof, and was never instructed or authorized by either Winslow or Jones, to give any public notice or otherwise of the existence of any such right or claim in themselves or others.

After working under the French process a few years in the preserva-

tion of meats, vegetables, &c., we found it not so reliable as the English process, which consisted in putting up the meats and matter to be preserved raw or uncooked, into tin cans, sealing air-tight, bathing a few hours in boiling water, tapping the cans to let out the air, re-
185 sealing and bathing afresh; and since 1855 I have extensively been engaged in the preservation of sweet corn in its own juice, and in its unripe or green state, and by the process named.

STEPHEN H. PROVOST.

Affidavit of Stephen H. Provost.—Taken in another cause, May 28, 1870.

I reside at Yonkers, State of New York. I am in the preserving business, and have been thus engaged for 25 years. The first corn preserved in fresh state in hermetically-sealed cans, seen by me, was exhibited by Nathan Winslow at my place of business in New York, about the year 1849. I am not positive that the two or three casks of Winslow's corn, alluded to in a former deposition as being consigned to me by said Winslow, was precisely in the year 1849, but was about that time, according to the best of my recollection. The consignment was made immediately after the corn was exhibited to me by Winslow.

STEPHEN H. PROVOST.

Deposition of Charles Mitchell for respondent.—Taken June 22, 1871.

I, CHARLES MITCHELL, of Charlestown, in the State Massachusetts, being duly sworn, on oath depose and say:

Int. 1. State your age, place of birth, and occupation.

Ans. 61 years; Aberdeen, Scotland; tinsmith; am a preserver of canned articles of food.

186 Int. 2. When and where, of whom, did you learn the art of preserving meats, fish, and vegetables in hermetically-sealed cans?

Ans. At Aberdeen; 1831; John Moir & Son.

Int. 3. How long have you practiced this art, and in what places and in connection with what persons?

Ans. I stopped with John Moir till 1841; was engaged to come to Merimachi; commenced to preserve salmon in Halifax; afterwards went to St. John, New Brunswick, and preserved salmon; returned to Halifax and began preserving lobsters till the latter part of 1842. In Halifax I was engaged by Tristram Holliday, firm of Treat, Noble & Co., to come to Eastport; stopped in Eastport till 1844 or '45. I went to Boston and returned to Eastport and commenced preserving for Wm. Underwood in 1845 or '46. I finally left Eastport and went to Charlestown in 1847, as far as I can recollect. I preserved at first in Boston and then went over to Charlestown, into Wm. Underwood & Co.'s factory, and have since that time been engaged in that business with Wm. Underwood & Company.

Int. 4. State the articles of food which have been preserved by you in the exercise of your art.

Ans. Salmon, lobsters, clams, scallops, cod, haddock, halibut, trout, mutton, veal, tripe, venison and other kinds of game; green peas, green corn, green beans, Lima beans, tomatoes, carrots, turnips and beets, onions, sage.

Int. 5. What articles of food were preserved by you before you came to this country, in Aberdeen, Scotland, and the precise process of preserving each class of articles?

Ans. Everything stated above except tomatoes and green corn. The

beef and other animal food we put into the cans raw, add a little pepper and salt, and close it up, put it into a bath at the temperature of 200° or 205° Fahrenheit. After the bath becomes boiling, we
187 gave them two and one-half hours before taking from the bath and opening. We open the small hole in the centre of the can, and by puncturing; return them to bath and give them time according to the size of the can and the article. We re-seal before returning to the bath. In Aberdeen, Scotland, we used cans of from 1 to 10 pounds' weight. After replacing, we gave the can 3 hours and 20 minutes' time after coming to a boil. Carrots and turnips were all put in at once, in 2-pound cans, used in the British navy; placed in the cans in the raw state; filled up with water; subjected to the same treatment as the meats; everything the same; fish in the same way as the meats.

Int. 6. What articles of food were preserved by you during your residence in New Brunswick?

Ans. Salmon, cod, and haddock, lobsters, beef, mutton, and veal, green-turtle soup, hare soup, green peas.

Int. 7. State in detail the precise process of preserving those articles during your residence in New Brunswick.

Ans. The same as stated in my answer to int. 5.

Int. 8. What articles of food did you preserve during your residence in Eastport? State in detail the precise process used by you there.

Ans. Most of the same articles I have above mentioned, and also green corn. The same process as stated in answer to int. 5.

Int. 9. When and where did you first preserve green sweet corn in hermetically-sealed cans?

Ans. Eastport, in the September of 1843.

Int. 10. State in detail the precise mode in which you preserved the green sweet corn in hermetically-sealed cans at Eastport.

Ans. Mr. Underwood sent down green corn to me in a steamer, and asked me to put it up. I husked it; cut the two ends off; placed it in the cans, cobs and all. I think it was the first. In the latter part
188 of 1843 or in 1844 commenced putting up green corn cut from the cob, after boiling the same; found the article did not look well; tried it without boiling by cutting it off the cob green. At that time we put in a little water with the green corn into the cans. We then dropped that, and put the corn into the cans raw with nothing else. I was then experimenting, and had never seen green corn before. We husked the corn; cut it off the cob into coolers, and packed it in cans immediately after cutting, and as soon as possible put it into the bath. We sealed hermetically before putting it into the bath. Time of bathing differs according to the state of the corn when it comes into the factory. I have bathed for two hours, then taken out the cans and probed or punctured, and then gave the cans three or four hours if the corn was old. We probed by opening the small hole in the center of the can, leaving it open, then shutting again in about a minute or two minutes. All cans were done on the same principle. We re-sealed the stud and returned to the bath; put the cans in at 200° and raised the water to boiling. We were not particular to a few degrees; never had a thermometer.

Int. 11. State the quantities of green sweet corn preserved by you in the manner above stated, while you were at Eastport, and after you left Eastport, down to the present time.

Ans. I could not exactly state the quantity. After we went to Charlestown we put up considerable, until we went into salmon. I am not prepared to answer the amounts; it is too large for me to mind.

Int. 12. To what market was the corn preserved by you sent for sale?

Ans. I do not know.

Int. 13. Whether or not the corn preserved by you kept well—retained its original qualities, and found a ready sale.

A. Yes.

189 Int. 14. Who composed the firm of Treat, Noble & Co.?

Ans. Tristram Holliday, U. S. Treat, and Isaac Noble, and myself.

Int. 15. Who was the practical operator in preserving meats, fish and vegetables, at Eastport, under Treat, Noble & Co.?

Ans. Myself.

Int. 16. Did you take an account of stock of the goods you had at Eastport in 1844?

Ans. I did. The firm of William Underwood & Co. bought Noble and me out at that time.

Int. 17. What quantity of preserved green corn did you then have on hand?

Ans. 36 cases—1-pound and one-quarter cans.

Int. 18. Whether or not that corn was preserved in its own juices.

Ans. It must have been. We did not do much in the boiling on the cob or boiling before cutting off. Those were merely experiments. Some of it may have been sold.

Cross-examined by Mr. Clifford:

Int. 1. You were with Treat, Noble & Co., were you not, until 1846, at Eastport?

Ans. Was with Treat, Noble & Co. till 1845. Then it was Noble & Mitchell up to Sept. '46, when we sold out to Underwood.

Int. 2. Did Mr. Treat leave the firm in 1845?

Ans. Yes, sir; he then went over to Treat's Island.

Int. 3. What amount in weight of water do you usually place in a one-pound can of peas or beans?

Ans. If well packed, from three to four ounces.

Int. 4. How much salt is generally used in the same?

Ans. I use no salt; have used sugar with the peas, but I do not do it now.

190 Int. 5. Who first suggested the idea of boiling the corn on the cob that you say Underwood sent you down from Boston?

Ans. I did.

Int. 6. Who first suggested cutting off the corn and then boiling it before putting into the cans?

Ans. I did it myself.

Int. 7. How many cans did you pack with the corn on the cob?

Ans. One-half dozen or thereabouts—4-pound cans.

Int. 8. How many cans by boiling before putting the corn into the cans?

Ans. I may say with safety at least 500.

Int. 9. In what was the corn placed that came down from Boston?

Ans. Came down in barrels, open at the sides and top.

Int. 10. How many barrels came down the first time?

Ans. I could tell eight or ten, I should think. We did not do much business in Eastport in corn. It did not amount to much. It was in trying to keep it white that I was packing at Eastport. I did not know much about it; it was a new thing to me.

Int. 11. Can you swear of your own knowledge that any of the corn you put up in Eastport was ever sold?

Ans. I could not.

Int. 12. Were you not attempting to learn a good method of packing corn, at Mr. Underwood's request?

Ans. I was. It was solely at his request that I started with green corn.

Int. 13. Were you not the practical operator in corn when you went up to Charlestown?

Ans. I was.

Int. 14. Do you swear that you remember of having written the letter from which you read in giving your answer to the 17th interrogatory?

191 Ans. I swear that I remember of having signed my name to the letter. I did not write it.

Int. 15. Who wrote the schedule on the 3d page?

Ans. I did not write it. It was written by John Nelson, a clerk.

Int. 16. Have you ever seen that letter since it was written till now? In whose possession has it been?

Ans. I have never seen it. I could not tell. I guess it was Underwood's.

Int. 15. Can you state that the schedule was made at the same time the letter was written?

Ans. I swear it was. It is in the same letter.

Int. 16. Please annex the letter to your deposition.

Ans. I will, and mark it "Exhibit A."

Int. 17. What does the 36 mean before the words green corn in the schedule; cans or cases?

Ans. It means cans.

Int. 18. Are you not now in the employ of Charles J. Underwood?

Ans. Of William Underwood & Co. That includes C. J. Underwood.

Int. 19. Did you know Jeremiah Ford and Samuel Rumery when you were down at Eastport?

Ans. I did. They were both employed in the factory.

Int. 20. Do you know what was done with the corn you packed the first year at Charlestown?

Ans. I do not.

Int. 21. Can you state how many cans were packed?

Ans. I cannot.

Int. 22. Why do you cut the kernels from the cob in preference to boiling them on the cob?

Ans. They come out better, and when the work is finished they look better and whiter.

Int. 23. Do you apply the same process to the packing of peas and beans that you do to green corn?

192 Ans. Pretty much the same, only we put them into warm water before canning them.

Int. 24. Do you use the same process when you pack raw beef as you do when you pack green corn?

Ans. Much the same.

Int. 25. How many times did Underwood send down the barrels of corn to Eastport to you?

Ans. I could not tell.

Int. 25. The schedule in the Exhibit A shows all the stock you had when you sold to Underwood, does it not?

Ans. It shows all we had when I left Eastport, and shows the stock we sold to Underwood.

Int. 26. Why do you puncture the cans?

Ans. To extract the air out of them.

Int. 27. Is this the only purpose?

Ans. Yes.

Int. 28. When did you first use a corn-press?

Ans. I never used one.

Int. 29. Did you make any difference in the method of making your cans at Eastport after you began to put the corn into the cans raw?

Ans. No.

Int. 30. What would be the effect if you did not puncture or open the can?

Ans. In all likelihood the cans would become bad.

Int. 31. Into what sort of receptacles did you put the cans of corn you sent up to Underwood from Eastport?

Ans. Sometimes in barrels, sometimes in puncheons. As a general thing, we got orders for other articles along with the corn, and we put the cans of the articles into the barrel or puncheon, as the case might be.

Int. 32. About what time did you cease putting up corn in the fall of 1846, when the letter Exhibit A was written?

Ans. I could not tell exactly, but generally the packing closed in the latter part of August.

193 Int. 33. After you went to Charlestown to work for Underwood, I understand you that you had charge as operator of the corn-packing.

Ans. I did.

Int. 32. When did Wm. Underwood die?

Ans. I don't recollect.

Int. 33. Have you had charge of the preserving down to the present time, in the factory of the Underwoods?

Ans. I have.

Int. 34. Had you made any shipments of corn in 1846, before you made the offer to sell to Underwood?

Ans. I don't think that we did. We might have shipped to Lewis after Underwood prospected it, but I can't recollect it.

Int. 35. Describe the process by which you packed corn the first season you were in Charlestown.

Ans. We got it in from the market, husked it, took it from the cob, and immediately put it into cases; hermetically sealed it, put it into the bath at a temperature of 200°; brought it to boiling heat; give it from two to two and one-half hours, as the condition of the corn might be; drew it from the bath and probed it or punctured it; re-sealed it and returned it, and gave it from three to four hours, as the condition of the corn required.

Int. 36. By whom were you first spoken to about giving your testimony in this case, when you first gave it?

Ans. Mr. Charles J. Underwood.

Int. 37. What did he first say to you?

Ans. I can't recollect much about it.

Int. 38. Did he call your attention to the fact that you had packed corn by putting it into cans raw in Eastport?

Ans. I don't think he did. I can't remember.

Int. 39. How could he have known you had done so, when he was at Boston and you in Eastport?

194 Ans. The conversation about packing green corn was many years afterward. There is no doubt but what, when I was packing at Eastport, I was writing him about my process.

Int. 40. Do you swear that you ever did write him describing your process?

Ans. In sending him goods, I always wrote him the process. I can swear to it, of course.

Int. 41. Do you remember of Mr. Rumery & Burnham sending you a corn-press up to Charlestown?

Ans. There was a corn-press came up from Rumery & Burnham. I was not alone at the time.

Int. 42. Did you ever use it?

Ans. Not in packing corn.

Int. 43. When did you last see the letter Exhibit A, before you saw it here to-day?

Ans. To-day.

Int. 44. Has Mr. Chas. Underwood spoken to you about this letter lately, within a year or two?

Ans. No, sir.

Int. 45. What was Mr. Chas. J. Underwood's position in the house when you first went up to Boston and Charlestown?

Ans. Partner.

Int. 46. Where did he stay; in the factory or counting-room?

Ans. From 1847, several years, he spent with you in the factory. After that he went to the counting-room in Boston.

Int. 47. You say you wrote to Mr. Underwood about your processes from Eastport. Were you in the habit of writing him from time to time of your different processes with corn while there?

Ans. No, I was not; he might have suggested an idea, and I followed it up; that is all.

195 Int. 48. Did you ever hear of Mr. Winslow when you were at Eastport?

Ans. No sir.

Int. 49. Did you ever know any men, when you were at Eastport, who came from the west of the State, and had packed articles of food there under Winslow or any one else?

Ans. No, sir.

Int. 50. I understand that you had adopted the process of packing the corn into the cans raw in the year 1846, as preferable to the others you name, and to the exclusion of them.

Ans. I tried several processes, and can't exactly recollect; I had adopted the raw system altogether then. I had dropped the others, and adopted putting it up in its own milk.

Redirect by Mr. Bradbury:

Int. 1. In your answer to cross-int. 35, you say you took the corn from the cob. State the manner in which you removed.

Ans. When the kernels run straight, we used a common case-knife, and put the knife in betwixt the kernels, and took it off whole; when they run cross-wise, we had to cut it off.

Int. 2. To whom did you send the canned corn put up by you at Eastport?

Ans. To William Underwood & Co.

Int. 3. Was the corn mentioned in the schedule Exhibit A, the balance of corn you had on hand after filling other orders?

Ans. It was.

Int. 4. Have you a recollection that there was a quantity of canned corn among the goods sold by you to William Underwood & Co. in 1846?

196 Ans. I had no recollection of it till I saw that letter to-day.

Int. What is a corn-press?

Ans. A corn-press is a cylinder, about three or four inches wide, ten inches long, with a cone at the bottom to fit the hole in the case. By wheel and lever, you force the corn into the case. By case, I mean can.

Cross resumed:

Int. 1. In answer to the 11th direct interrogatory, you speak of putting up corn till you went into salmon-packing. When was it that Underwood & Co. went into the salmon-packing?

Ans. I think we went into salmon-packing in 1850 or 1852.

Int. 2. Have Underwood & Co. practiced the packing of corn since that time?

Ans. I have not been at home in a corn season since that time.

Int. 3. At what season of the year is salmon packed?

Ans. From May 1st to September.

Int. 4. Have you packed any corn for Underwood & Co. since 1850 or '51?

Ans. No, sir.

Int. 5. Where have they procured their corn since that time?

Ans. I can't answer you.

Int. 6. Why did the company send you to packing salmon and give up the packing of corn after 1850 or '51?

Ans. That is a thing I had nothing to do with.

CHARLES MITCHELL.

197 EXHIBIT A.

EASTPORT, 22 *September*, 1846.

Messrs. UNDERWOOD & CO.:

GENTLEMEN: Mr. Noble had an interview with you last week about selling out our trade, mentioning at the same time that you would employ me at reasonable wages. If you think well of it, I would go to Boston next boat and make arrangements with you, when I would tell you what I would be willing to serve you for. I would prefer taking part of the business myself, but as Mr. Noble tells me that you would rather employ me at weekly wages, I am willing to do that, should you make them an object. I need not mention my experience as a preserver, as you have had opportunity of knowing by this time, having had eleven years' experience in the first house in Europe, to wit: John Moir & Sons. Below is an account of our present stock, furnished by request. Please write me immediately, and oblige, gentlemen,

Your ob't serv't,

CHARLES MITCHELL.

STOCK.

2,000 lobsters	1	lb.,	25,	15	per cent.
1,000 "	2	"	44,	15	"
144 clams	1	"	30,	10	"
81 "	2	"	53,	10	"
563 salmon	2	"	40,	10	"
456 shad	2	"	40,	10	"
☞ 46 green peas	1	"	25,	10	"
☞ 77 " "	2	"	45,	10	"
80 roast beef	2	"	42,	10	"
35 mutton-chops	2	"	42,	10	"
20 boiled mutton	2	"	42,	10	"
☞ 36 green corn	1¼	"	31,	10	"

Some small remnants of other articles. C. M.

198 *Deposition of Upham S. Treat, for respondent, taken June 7, 1871.*

I, UPHAM S. TREAT, of Eastport, in the district of Maine, being duly sworn, doth depose and say as follows, in answer to interrogatories proposed to him by Bion Bradbury, esq., of counsel for defendant.

Int. 1. State your place of residence, age, and your past and present occupation.

Ans. I reside in Eastport; age, 62. I have been a packer of canned goods. Am at present retired from business.

Int. 2. When and where were you first engaged in putting up canned goods; and have you put up both animal and vegetable products?

Ans. My first experience was in 1839, in the city of St. John, N. B., at which time I put up salmon alone. In 1841, the firm of Treat, Noble & Co. was formed and commenced business at Eastport, Me. We then put up (1842) salmon and lobsters.

Int. 3. State when and of whom you learned the art of packing hermetically-sealed canned goods.

Ans. I learned in 1839, at St. John, N. B., of Tristram Holliday.

Int. 4. Who constituted the firm of Treat, Noble & Co., and who was the practical mechanical operator of the firm?

Ans. Myself, Noble, and Holliday. Holliday was the practical operator.

Int. 5. What articles of food were canned by Treat, Noble & Co.?

Ans. We put up meats and vegetables at that time, green peas and green corn.

Int. 6. How long did you continue in the business of canning under the style of Treat, Noble & Co.?

199 Ans. Until 1843–'4.

Int. 7. How long did Treat, Noble & Co. carry on their business of canning at Eastport after you left the firm?

Ans. After I withdrew the firm continued to operate for about two years, and was then Noble & Mitchell.

Int. 8. Are you acquainted with Samuel Rumery, one of the plaintiffs in the case, and how long have you known him? Did he at any time work for Treat, Noble & Co., at Eastport, in the business of putting up canned goods? If so, when?

Ans. I am. I have known him since 1841. He did work in 1841, as a common laborer at Eastport for the firm in putting up canned goods.

Int. 9. After you left the firm of Treat, Noble & Co., where did you go into business, and when, and what business?

Ans. In 1846, I rented buildings, and made arrangements to commence the canning business anew on Treat's Island on my own account.

Int. 10. What articles of food did you put up in hermetically-sealed cans at Treat's Island?

Ans. I put up salmon and lobsters, and various kinds of meats and game; turnips, cabbage, green beans, peas, corn, and potatoes.

Int. 11. State whether or not Treat, Noble & Co., put up green corn in cans hermetically sealed; and if so, in what years?

Ans. We put up some corn at Eastport; a very small quantity at that time—1842 and 1843; it was a matter of experiment; had not been introduced into the market. I went on to Alexandria, D. C., and to various cities, and found nothing of the sort; no one knew anything of it.

Int. 12. When did you commence putting up canned green
200 corn at Treat's Island; how long did you put up; what quantities; did you put the same into the market; in what places; to

whom did you make sales and shipments? State the quantities in each year as near as you can.

Ans. In 1848, and continued to put it up till 1856; made but a few dozens at first, and increased in each year the quantity up to hundreds of dozens. Some went to New Orleans to one Thomas Means; others to Boston, to Wm. Underwood, Wm. H. Davis and Wm. R. Lewis; to New York, to Wells, Miller & Provost, and Thos. Kensett, (now of Baltimore;) to Baltimore, to Numpson, Thomas & Co. Thos. Kensett & Co. continued to order after their removal to Baltimore. I shipped large quantities, but cannot state the quantity each year, as my books were burnt. [I have a memorandum showing the number of dozens of ears of corn. The number of ears in dozens in 1852 was 1,665½; in 1853 was 3,425½ dozens. This amount of corn was canned by me in those years, and was all the corn put up; this corn was from Boston.] I obtained this information of Luke Brooks, of Boston, who sent me the corn. (Answer objected to as hearsay, being taken from a memorandum made from the order of another man. The portion objected to is enclosed in brackets.) I have no recollection of the amount except as obtained from the party from whom I ordered the corn. In 1849 I supplied Thos. Kensett & Co. with 16 dozen 2-lb. cans. After supplying this order I had remaining 89 dozen 2-lb. cans and 21 dozen 1-lb. cans. In 1851, after supplying orders, I had on hand, January 1, 130 dozen 2-lb. cans and 15 dozen 1-lb. cans. In 1855, I had an order from Numpson, Thomas & Co., for 10 dozen 2-lb. cans and 24 dozen 1-lb. cans. In 1856 I shipped to W. H. Davis, of Boston, 40 dozen 2-lb. and 40 dozen 1-lb. cans. These stated shipments were but a small part of the total actual shipments during those years.

Int. 13. State minutely the process by which you put up salmon in St. John.

201 Ans. The salmon were packed in the cans in the raw state, and a rich gravy, made from the fish, applied; they then were sealed up and put into a hot-water bath and brought to boiling heat from one to two hours, according to the size of the can; they were then taken from the bath and probed or punctured and the air let off, and sealed up instantly; they were then returned to the bath and given the same length of time as at the first bathing.

Int. 14. State minutely the process by which Treat, Noble & Co. put up and canned fish, meats, and vegetables.

Ans. Salmon as above stated. Lobsters same process, except that they cooked before they were put into the cans. We treated the meats in the same manner as the salmon. All vegetables, except turnips, were put raw into the cans and treated like the salmon.

Int. 15. State minutely the process by which you put up green corn in the raw or uncooked state at Eastport, and also at Treat's Island, giving each particular of the process from beginning to end.

Ans. In putting up corn at Eastport, I cannot testify as to the precise process of putting the corn, as Mr. Mitchell was the operator and I had the out-door business, what little there was done, and there was very little put up; I do not know the process of canning. In 1847, on Treat's Island, I commenced to operate practically myself. I superintended the process myself. The process was as follows: The green corn was cut from the cob, and packed into cans raw in its own juices, and it was treated like the others, being put into a bath and there kept, according to the size of the cans, one and two pounds, from one hour to two hours and a half; this was the first bathing; it was then taken out and punctured, instantly sealed and returned to the bath, and there kept

the same length of time as at the first bathing. We tried ex-
202 periments, as this was pretty hard on the cans, and I then tried the experiment of putting it, after being cut from the cob, into a boiler and then boiling it. When the corn was not green enough it was found necessary to add a little water. We afterwards succeeded in making the cans strong enough to bear the strain. After trying the experiment, I swear that we put up the corn by putting it raw into the cans according to what I understand to be claimed as the Winslow process. I put it up in 1847, in the raw state, according to the above process, and Evans did the same. It was only for a short time that I put up the corn after previous boiling. I resorted to this method chiefly on account of the weakness of the cans, and also because we were thus enabled to remove the hulls.

Cross-examined by W. H. Clifford, plaintiff's attorney.

Int. 1. Do you swear it was before the year fifty-three that you did away with the previous boiling or heating process before putting into the cans?

Ans. I don't like to stick for a year so long ago, and I couldn't swear to it; but I think it was in 1852 that we gave up that process.

Int. 2. Can you fix the date more accurately than above?

Ans. I packed by this process to the exclusion of this process (previous boiling) as early as 1853.

Int. 3. In whose handwriting is the paper you have held in your hand while testifying, and from which you have read your replies?

Ans. The blue one is in my son's, and the white one in mine.

Int. 4. From whom or from what source have you derived the information, dates, etc., which you have read from that paper?

Ans. The contents of both these papers are drawn either from my own recollection or my records.

203 Int. 5. Have you consulted with any one about the matters, dates, etc., to aid your own recollection in this testimony?

Ans. I have not.

Int. 6. How do you fix the date, 1841 and '2, that you were at St. John?

Ans. In addition to my own recollection I have books to show it.

Int. 7. How many cans of corn will you swear you put up in 1848?

Ans. I was putting it up experimentally, and never put up less than thirty dozen.

Int. 8. How much did you put up in 1849?

Ans. At the lowest limits 200 dozen.

Int. 9. How many in 1850?

Ans. I put up fully another hundred—making 300.

Int. 10. How many in 1851?

Ans. I think during the years 1851, '52, '53 I increased during each year by a hundred dozen cans. In 1856 I had an order from a Boston firm for 80 dozen. I was running upon what you call the Winslow process exclusively.

Int. 11. Where was the corn grown that was sent you at Treat's Island from Boston?

Ans. It was grown in Massachusetts and bought in Faneuil Hall Market, in Boston. It came packed in flour barrels with cloth tied over the top, and holes cut in the sides of the barrel. It took twenty-four hours to come down, coming by steamer. Previous to 1852 it came by express. The ears came down with the husk on. I was the operator on the corn myself.

Int. 12. In 1852 how much salmon, lobster, and meat did you pack on Treat's Island?

Ans. About 100,000 cans of lobsters, and I think a large amount of salmon and meat. The amount of corn was small in proportion to the others.

204 Int. 13. Did you pack salmon and corn by the same process?

Ans. Yes; by the Scotch process, as we called it.

Int. 14. Why did you pack the salmon in so different a manner from the lobsters?

Ans. We could not shell the lobsters in the green state.

Int. 15. When did you first yourself use the expression "in its own juices," in relation to corn?

Ans. I always put it on the cans—on the labels.

Int. 16. In what condition were the ears of corn which arrived for you from Boston at Treat's Island?

Ans. Invariably in good condition.

Int. 17. Was it fresh?

Ans. It was fresh and green.

Int. 18. Was it in the milk?

Ans. It was.

Int. 19. Was it in what is called the milky state?

Ans. It was.

Int. 20. Why did you sometimes use to float it?

Ans. We used water to float the hulls, and skimmed it when the juices were not sufficient for this purpose.

Int 21. How long will green corn in the milky state so retain the juices, after plucking, that the juices will flow?

Ans. Four days if kept cool.

Int. 22. Was any sweet corn raised at Eastport then?

Ans. No.

Int. 23. How did you happen to fix upon what I call the Winslow process?

Ans. I was doing every kind of vegetables, and thought I could do corn in the same manner. What would do for one would do for the other.

Int. 24. In preserving corn by this process why did you cut it from the cob?

205 Ans. Because it was a quicker process. I know of no other reason.

Int. 25. Describe the manner of cutting the corn from the cob.

Ans. We placed a board across the tub or other receptacle, and, resting the corn perpendicularly upon it, cut it off with a common case-knife.

Int. 26. Did you know one Jeremiah R. Ford?

Ans. I did.

Int. 27. With whom, and where, did he work when you knew him?

Ans. I think he worked the first season with Treat, Noble & Co. After that, I think, with Mitchell & Noble; how long I do not know.

Int. 28. How many persons were employed on Treat's Island by you in 1852?

Ans. At least, I had fifteen hands in packing, boxing, labelling, making cans; one-half boys and women.

Int. 29. What was the improvement you finally made in the cans, so that they were made stronger in 1852?

Ans. We double-seamed the cans and then soldered over the seam.

Int. 30. What proportion do you think was lost by explosion before that time?

Ans. From six to twelve out of one hundred would open and strain in the first bathing?

Int. 31. Why is it that the cans are so strained in the first bathing?

Ans. The larger amount of pressure is occasioned by the amount of gas or atmospheric air the goods contained.

Int. 32. Did you ever pack any corn by putting it into the cans on the cob?

Ans. I never did, to my recollection.

206 Int. 33. When you packed fish and lobsters by boiling or cooking before you put the articles into the cans, did you vent the cans afterward?

Ans. I did.

Int. 34. You say you are not sure whether it was 1852 or 1853 that you left off the heating or boiling process before using the cans. Was it not in '53 that you first got the double-seamed cans for holding the strain of the corn?

Ans. I should think it was in 1853. I cannot bring anything to bear to satisfy my mind which it was. It is my impression it was 1853.

Int. 35. How was the gravy prepared with which you prepared and packed the salmon?

Ans. We took the salmon heads and boiled them until it was boiled up, and took away the liquid and seasoned it with pepper and salt. We then put the salmon meat into the cans and then poured the gravy over it and sealed up the cans.

Int. 36. Did you or not prepare the gravies for the preservation of the meats, as to the spicing, in a similar manner?

Ans. We generally applied a little salt to the top of the meat in the can before sealing.

Direct resumed:

Int. 16. When did you first put canned salmon into the market? Was it then in the market; and what means did you have of knowing if it was in the market at that time?

Ans. In 1841 we sold to Wm. Underwood, of Boston, a few dozen on trial; as far as my knowledge goes, it was not in the market. We visited Boston, and we heard and saw nothing of it.

Int. 17. When did you first put canned lobsters into the market? Was the article then in the market; and what were your means of knowing if it was not in the market?

207 Ans. In 1842 and '43. There was at that time none in the market, and I traveled all along the coast to Boston, New York, Philadelphia, Baltimore, Washington, and Alexandria.

Int. 18. When did you first put canned corn into market? Was the article in the market at the time, and what were your means of knowing that there was none in market?

Ans. In 1848; none in the market; from my trips in selling other canned goods I acquired a knowledge of the market, and I attempted to sell the corn, and could sell but few cans at any place or to any house. It was unknown in the market at that time. I visited the cities of New York, Boston, and Philadelphia. I sold a few cans of corn to Bonard & Bros., Greenwich street, N. Y., this being the first of corn they had seen. The corn kept well, and it met with a ready sale, and sales increased from year to year.

Int. 19. Whether or not your corn was put into the market with the cans labelled.

Ans. It was.

Int. 20. When did you first hear that J. Winslow Jones was putting green corn up or claimed a patent for the process? Who told you? What did he say about it?

Ans. Before the rebellion; some ten years since. I met Samuel Rumery at Eastport, and he told me that Winslow claimed a patent, and was going to put us all through. "That is not so," said he, "for you put up corn ten years before he ever saw or heard of it, as I know of it." Same Samuel Rumery that worked for me, or Treat, Noble & Co., at Eastport. Corn put up was sweet corn. (Objected to, both question and answer, as irrelevant—hearsay.) Tristram Holliday is dead.

UPHAM S. TREAT.

208 *Deposition of Henry Evans, jr., for respondent, taken March* 30, 1871.

1. What is your name, age and occupation, and residence?

Ans. Henry Evans, jr.; aged 46 years; oyster, fruit, and vegetable packer, by the process of hermetically sealing.

2. When and where did you first learn the art of packing and preserving hermetically-sealed goods, and what kind of goods have you worked upon?

Ans. I first learned the art in New York, in 1847–'8—think it was 1847. We packed then green corn, string beans, pineapples, pie-plants, green peas, fish, oysters, plums, meats.

3. By what method did you pack and preserve your animal matter? (Objected to.)

Ans. We packed by two processes, French and Scotch.

4. Are you acquainted with more than one method of packing and preserving hermetically-sealed goods, and have you practiced the same? and, if yea, please state fully the processes and their features.

(Objected to, witness not having qualified as an expert.)

Ans. I am, and have practiced the same. I term the French process that which I first learned. In vegetables we slightly cooked, so as to extract a portion of the fixed air; then put the vegetables in cans and soldered it up air-tight, and immersed in boiling water a certain length of time; sometimes placed the cans in a cold-water bath; generally used to experiment a great deal in those times. The other process was taking the corn or vegetables, and putting the goods in a raw or green state in cans, soldering them up air-tight, immersing them in boiling water a given length of time; then drawing them out of the bath, probing or venting the cans immediately; then replacing them in boiling water
209 a given length of time again; then taking them out and plunging them in cold water; and we generally do that, but do not consider it absolutely necessary.

5. Where, and with whom, and when did you use what you term the French process, and where, of whom, and when did you learn and use the other and later process described in your answer to the fourth interrogatory?

Ans. I first learned the French process in New York, in the establishment of Wells, Miller & Provost; assistant to a Frenchman there, who was their processor or preserver, in about the year 1847, or not later than 1848; the other and later process I learned and used at Eastport, Maine, on Treat's Island, of U. S. Treat, of that place, in the year 1848.

6. Have you ever applied said processes to the packing and preserving of green corn; and if yea, where and when have you done it?

Ans. I have done it in New York in 1848; and think in Eastport in 1848; and in Portland, Maine, 1849.

7. State precisely how you applied each of the above processes to the packing and preserving of green corn.

Ans. In French process we parboiled or slightly cooked, (I was trying to think, and it is a good while to carry the mind back a period of 20 years;) then cut the kernels off the cob after parboiling; then packed in cans, sometimes adding small amount of water; then soldering it up air-tight and immersing in boiling water a given length of time; taking it out and generally immersing in a cold-water bath, when the process was complete. This French mode failed to a certain extent that season; corn did not keep. We adopted the mode of cutting the corn in its green or natural state from the cob; packed it in the can and soldered it up; immersed it in boiling water a given length of time; then we pierced or vented it; put it back in boiling water a given length of time. On failure of his usual process the Frenchman adopted the process last
210 described; and on going to Eastport to work I found the last process to correspond with what was there taught me by U. S. Treat, and called or known as the "sealed process."

8. In the French process, so called, state whether or not the feature of probing or venting the cans was essential to success.

(Objected to, witness not having qualified as expert.)

Ans. By the French process the probing or venting was not used; and, as I understand it, it would not be the French process with probing.

9. By the French process, so called, as used by you and those under whom you worked, was the venting or probing of the cans or vessels at all practiced?

Ans. No.

10. Was the corn packed and preserved by you in 1848 and 1849 put upon the market for sale; and if yea, where, and to whom, and in what quantities?

Ans. It was, and sold to Thos. Kensett & Co., in New York. I was packing in Portland lobsters, other goods, and corn, by the Scotch process, so called, as I have described before, and shipped the goods to Thomas Kensett & Co., New York.

Cross-examined by W. H. Clifford, esq., attorney for plaintiffs:

1. With whom did you work in 1847–'8 in New York, and in what capacity?

Ans. I worked with Wells, Miller & Provost, and first as manufacturer of tin cans and then as assistant processor.

2. What did you do as assistant processor, and how long were you such processor?

Ans. Assisted in bathing and kept the time in bathing, which
211 is about the whole of it in processing; and was processor one season in New York, and in their employ two or three years.

3. Where and of whom did you learn the terms, Scotch and French process?

Ans. In New York, of the French processor there; don't recollect his name.

4. Did you pack meat, pineapples, corn, and fish by the same process?

Ans. We did; and am doing the same up to this day.

5. Where did the corn come from which you packed in New York in 1847–'8?

Ans. It was brought to the establishment mostly by Long Island gardeners.

6. Why did you wish to expel the fixed air, as you term it?

Ans. Because I consider it was more likely to preserve the article.

7. Who besides you was experimenting there in 1847–'8?

Ans. It was the Frenchman whose name I have forgotten, and also Mr. Miller, of the firm of Wells, Miller & Provost.

8. Are you aware that Mr. Provost has testified that no corn was put up in that establishment except by boiling and cooking before canning?

Ans. Am not. Mr. Provost had nothing to do with the manufacturing part of the establishment at that time.

9. How long was the corn bathed when the corn was cooked?

Ans. Don't fully recollect; was something like two or three hours.

10. By whom were you spoken to first or requested to testify in this case?

Ans. By Mr. Sewall.

11. When did you go to Portland?

Ans. 1849.

212 12. How long were you there? where was the factory in which you worked? and who was with you there?

Ans. I was in Portland a year or more; can't say whether I overrun a year or not. It was near the custom-house, on the same dock where Lewis was steaming lobsters, and in my own shop, known as Evans's shop. John Lewis was then with me, and Ben, a negro; and the other hands were from Portland. Can't remember the names.

13. How much corn did you pack by this Scotch process, in this place in Portland, in 1849?

Ans. It was not a large amount; may have been a thousand cans; and I think I sold it to Kensett & Co.

14. Do you swear that in packing this one thousand cans you cut green corn from the cob, put it into cans in a raw state, then sealed up the cans, bathed and vented them?

Ans. I do.

15. Why did you change to this process, and what is the reason you preferred it?

Ans. Because I considered it more reliable.

16. Why more reliable?

Ans. Because it kept the goods better from spoiling.

17. Why did it keep the goods from spoiling better?

Ans. Process of venting extracted more of the fixed air or gas, I suppose.

18. Why does the discharging of the air keep the corn better?

(Objected to as a matter not inquired about in the main examination.)

Ans. Don't know.

19. When and where was it that you put in water and parboiled the corn, as stated in the 7th direct.

Ans. In Provost's place in New York, and Thos. Kensett & Co., Grand street—Provost's in 1847 or '8, and Kensett & Co. in 1849 or '50.

20. Of what did Treat pack the most?

213 Ans. I did not work with Treat, but on my own account and under his instructions.

21. What did you chiefly pack at this place?

Ans. Lobster.

22. How much corn did you really put up by packing it into the cans raw?

Ans. I am not positive I put up any at Eastport.

23. What is your present business, and with whom or for whom are you at work, and where?

Ans. My present business is the packing of hermetically-sealed goods, as senior partner of Evans, Reves & Co., Baltimore.

24. Did you ever know Isaac or Nathan Winslow, or see them, or hear of them?

(Objected to as matter not in direct examination, and as hearsay evidence.)

Ans. Never knew them personally, but have heard of Nathan Winslow down East when I was there, and at Portland when I was there, as a packer but not an inventor of the corn process, but as being in France.

25. Did you know one Ford or one Rumery while down East, or while in Portland?

Ans. Don't recollect of knowing Ford, but did know Rumery at Eastport, slightly.

26. How do you pack corn, if any, now?

Ans. We parboil it, and sometimes pack it raw, and process it by venting.

27. Were you ever asked or solicited to contribute to the expenses of certain suits or suit pending in New England, or the defense of them, on the Winslow patents, and did you or not agree to so contribute, and by whom were you solicited?

(Objected to as immaterial, irrelevant, and not responsive to direct examination.)

Ans. I never was asked to contribute, and never agreed to.

214 28. When you were in New York what was the principal article of Kensett & Co.'s business in 1849?

(Objected to as irrelevant and not responsive to direct examination.)

Ans. It was green peas and vegetables; can't tell what, except some corn and Lima beans.

29. What vegetables were packed, if you can remember?

Ans. Peas, tomatoes, I think, Lima beans, and green corn.

30. How much of each, and of which was the most?

Ans. Can't say; don't recollect.

31. Can you remember the process of packing the corn?

Ans. I assisted to pack some corn. It was first parboiled, cut off and put into the cans—which was one way; and the other way, I cut the corn off the cob in its green state, packed it in cans, processed it by putting it in boiling water; then drawing it out and venting or probing, and putting it back again in boiling water; and put it into a cold-water bath; boiled it the first time either three and three hours, or two and four hours.

32. Who was with you when you packed that way?

Ans. Frederick Kensett was, Thos. Kensett, and Ira B. Wheeler, now dead. This was a process which I conducted alone. Frederick Kensett had access to the room, which was secret; the other two could have come in if they desired.

33. How much corn did you thus pack in that room?

Ans. Not a large quantity; more than one hundred cans; between a hundred and one thousand; at one time fifteen dozen, and at another time more; don't know what became of it.

Direct resumed:

1. What department in the business of Wells, Miller & Provost did Mr. Provost occupy, and what connection had he with the manufacturing department of said firm?

215 Ans. He attended to the office-work while I was there; seldom came up-stairs; and think he had nothing, if anything, to do with the manufacturing.

2. With whom did the Frenchman, under whom you worked at Wells, Miller & Provost, work before he came to the firm?

Ans. Louis Bernard, Greenwich street, New York.

3. In reply to interrogatory 24, cross, relating to hearing of Winslow down East, please state fully what you there heard of and about him and his corn-packing.

(Objected to as hearsay.)

Ans. I heard one of the Winslows had gone to France, or visited France, and was here engaged in packing sweet corn and sending it there, or from France here; and wrote home about sweet corn and mode of packing.

4. In 1847–'8–'9 had corn preserved green, packed in cans, and hermetically preserved, become a marketable article of merchandise in this country?

(Objected to as irrelevant.)

Ans. It had in 1848 and 1849.

Cross resumed:

1. In the last answer do you or not only speak of the corn, of the preparation of which you have before spoken?

Ans. Yes, of which I have spoken before.

2. State what became of the corn this Frenchman whose name you do not remember packed, and that about which you packed at Wells & Provost's.

Ans. His corn, to a large extent, spoiled. I packed it in the Scotch process, which I learned from him, and mine kept well; don't know that it all kept; but better than his. The venting made the difference in the keeping of the corn; and there was some contention about the cause of the corn's spoiling. He said it was the fault of the cans not being properly made. I said it was because they were not vented.

216 Mr. Miller permitted me to try my way, and then directed the Frenchman to pack my way. The Frenchman knew both ways, but preferred what he said was the French way, which was without venting.

HENRY EVANS, JR.

Deposition of Chas. J. Underwood for respondent, taken June 22, 1871.

CHARLES J. UNDERWOOD being duly sworn, deposes and says, in answer to interrogatories propounded to him by Bion Bradbury, esq., counsel for defendant, as follows:

Int. 1. State your residence, age, and occupation.

Ans. Reside in Boston; 45 years old; dealer in hermetically-sealed goods and oil-man's stores.

Int. 2. State when, where, and with whom you have been engaged in preserving articles of food in hermetically-sealed cans; the various articles so preserved by you; the mode of preserving those articles, and any experiments you have made in reference thereto, giving dates.

Ans. As early as 1849, and undoubtedly prior to that time, in Boston, Charlestown, East Lexington, all in Mass.; Harpswell, Maine; Bathurst, N. B.; and South West Harbor and Blue Hill, Maine; always as a manufacturing-partner in the firm of William Underwood & Co.; have been manufacturing-partner from 1845 to 1857 inclusive; the articles so pre-

served were all canned meats, fruits, and vegetables; fish and vegetables otherwise used; canned goods. We put the article in the cans raw, vented them after boiling, closed the cans, and gave them after-time in the matter of experiments. We were and are constantly trying variations from
217 our customary modes of procedure, for the purpose of attaining possible excellence.

Int. 3. When did you first become acquainted with the article of sweet corn preserved green?

Ans. In 1844, and possibly in 1843.

Int. 4. State the circumstances under which you first became acquainted with sweet corn so preserved.

Ans. To speak definitely, when clerk with my uncle, William Underwood; he ordered of Treat, Noble & Co., of Eastport, green corn packed in cans and cut off the cob in August, 1844, and received the article so ordered during the fall of that year.

Int. 5. Between that time and the time you commenced packing corn yourself were any other lots of preserved corn received by you from Treat, Noble & Co.?

Ans. I think we received each year after that green corn so packed from them, until Mr. Mitchell (Charles) was taken into our employment.

Int. 6. When did the firm of William Underwood & Co. commence packing green sweet corn?

Ans. In 1846 or 1847, in Boston or Charlestown, Mass. It is possible some was packed in Eastport, Me.

Int. 7. Who did you employ as your foreman in packing canned goods?

Ans. Charles Mitchell.

Int. 8. Whether or not you personally directed and assisted in putting up green corn.

Ans. I personally assisted; and I alone put the green corn up at times.

Int. 9. State the details of the process used by you in putting up green corn.

Ans. I caused the corn to be cut from the cob; filled into the cans as so cut, with no addition; soldered up; placed in the bath, vent-
218 ed, resealed, and given after-time. We boiled before venting from two to two hours and a half, according to the size of the can in which the corn was placed; and our after-time was from three to four hours, dependent on the size of the cans in which corn was placed.

Int. 10. State what quantities of corn were canned by you yearly after you commenced the business.

Ans. Probably from forty to fifty to several hundred dozens per annum, according to demands of our trade.

Int. 11. Did you make any experiments as to other modes of canning corn; and if so, what?

Ans. I did. I boiled the corn on the cob, then pried off the kernels, and put it up as before described. I removed the kernels from the cob and boiled them, and put them up as before described. I added an ounce or two of water to the can, and put it up as before described. I added sugar, and put it up as before described. Was satisfied with none of my experiments, the practice of which was of short duration, and so returned to the first-described method, i. e., putting it up raw, with no addition whatever.

Int. 12. When did you first adopt the plan of cutting the corn from the cob in the green, milky state and putting it into the cans raw, in its own juices, to the exclusion of other methods?

Ans. Unquestionably in 1849, and with little or no doubt a year earlier.

Int. 13. In what year did your firm commence to place canned corn in the market?

Ans. Certainly as early as 1844, and probably a year earlier.

Int. 14. Did it find a ready sale?

Ans. Should judge so from the fact that we continued to put up the goods in limited quantities.

Int. 15. Did you at any time purchase canned sweet corn of other parties than Treat, Noble & Co.? If so, of whom?

219 Ans. We did—from Nathan Winslow & Co., and J. W. Jones and others.

Int. 16. State in what years you purchased of Nathan Winslow & Co.?

Ans. We certainly purchased of them in 1855 and 1857; probably also prior to 1855, in the interval, and subsequent to 1857.

Int. 17. Annex to this deposition any bills of corn purchased by your firm of Nathan Winslow & Co.

Ans. I annex the bills marked "Exhibits A and B."

Int. 18. How was the corn purchased by you of Nathan Winslow & Co. labeled?

Ans. As my memory serves me, it was labeled N. Winslow & Co., Portland, describing the manufacturer.

Int. 19. Annex to this deposition any bills of corn purchased by you of John Winslow Jones.

Ans. I annex a bill marked Exhibit C, and another marked "Exhibit D."

Int. 20. Were you personally acquainted with Nathan Winslow and John W. Jones?

Ans. I became acquainted with Nathan Winslow personally shortly after 1850, and with John Winslow Jones some years later.

Int. 21. Did either of them at the time of these purchases of corn by you, or at any other time, inform you that either of them had any exclusive right in the art of preserving green corn or in its sale?

Ans. Mr. Nathan Winslow never made to me any allusion of the kind, but, on the contrary, about the year 1855, stated to me that his house and our house were the only parties who knew how to put green corn properly, or words to that effect. Mr. J. W. Jones made no allusion at the time to me until the year 1863, or possibly 1864, when
220 learning that I was to go to New York as witness in a case then pending to sustain the patents which he had taken out, he advised me not to go, as he said I knew I shouldn't be troubled in the matter, and if the patents were sustained it would be better for all of us, as there would be a less number of competitors in field, or language to that effect.

Int. 22. Did your firm at any time purchase or buy out the business of Noble & Mitchell at Eastport? and if so, when?

Ans. We did so, either in 1845 or 1846.

Int. 23. Did your firm at that time purchase the stock of canned goods which Noble & Mitchell had on hand at that time?

Ans. I believe they purchased the entire stock, together with the tools which they had.

Int. 24. Whether or not a portion of that stock consisted of preserved green corn.

Ans. My full belief is that there was a portion of green corn in the stock of canned goods.

Int. 25. Will you examine a letter marked "Exhibit A," annexed to the deposition of Charles Mitchell, and state what knowledge you have in reference to it?

Ans. I am satisfied we received the letter so described, bought the stock as described in it, and engaged the services of Mr. Charles Mitchell. I found the letter amongst our files, endorsed by clerk who was in our employment at the time, and it fully accords with my recollection of the circumstances. I exhibited to Mr. Mitchell to-day.

Int. 26. How are you able to fix the date at which you first received corn from Treat, Noble & Co.?

Ans. By letters and entries on our books.

Int. 27. Since giving your affidavit in this case, have you made examination with a view to fix the date with accuracy?

221 Ans. I have made no examination since I gave my affidavit in New York in 1863 or 1864. At that time, I made all the examination I considered necessary to satisfy myself as to dates in regard to which I might be uncertain.

Cross-examined by W. H. Clifford, esq., counsel for plaintiffs:

Int. 1. When will you swear you first packed any corn yourself?

Ans. In 1849.

Int. 2. Where, who was present with you, where did you procure the corn, in what condition did it arrive at the factory?

Ans. Charlestown, Mass. I did the whole bathing myself; part and parcel of our engagement for that season; in the usual good condition.

Int. 3. Can you not state more definitely where you obtained the corn? By condition, I mean was it husked or unhusked, on the stock, or how?

Ans. It would be impossible. It came with the husk on.

Int. 4. Can you not answer more exactly of the corn you say you packed alone, by yourself? How are you able better to remember the fact of packing than who furnished the raw material?

Ans. No; because, as the only exception I know of to the general rule, my uncle, then senior partner, went to Charlestown, and ordered off all my bath-men to go down East; left me to put up what corn came into the factory that day, and the succeeding amounts coming other days necessary to fulfill our engagement with the farmers. I cannot state positively that this occurred in 1849; but if it did not occur in 1849, it certainly did occur earlier than 1849; for after the occurrence referred to above I put up corn alone. My bath-book prior to 1849 being destroyed by fire or lost, causes me to be unable to fix any dates prior to that time.

222 Int. 5. How much did you pack at that time? State the amount of corn on the ear and the number of cans when packed.

Ans. I cannot say positively; many dozen; I cannot.

Int. 6. Do you know so that you can make oath to the fact that you put up any corn at that time alone, without assistance?

Ans. Yes, I can.

Int. 7. How large a business could a packer do in a day working alone and unassisted?

Ans. I did the bathing alone. I could easily at that time bath, certainly, 25 dozen in a day.

Int. 8. Your recollection, then, merely amounts to this, that you put up some corn at that time; that you did it alone; but does not extend to how much you put up or where the corn came from?

Ans. My recollection says that the corn came from farmers from whom we had engaged to receive it; and on the occasion referred to I bathed many dozens.

Int. 9. Since you cannot remember how many dozens or how many at all, how can you be so positive that it was many dozens?

Ans. I can be sure that it was more than 100 cans.

Int. 10. How?

Ans. Because it wouldn't have seemed a hardship to me to have undertaken a very small amount.

Int. 11. Can you give me the names of any purchasers of that corn of which you speak?

Ans. Not without reference to my books in Boston.

Int. 12. When do you swear you first packed corn by putting it into the cans raw without any foreign admixture?

Ans. Certainly as early as 1849, and probably before.

Int. 13. When you packed in that manner, where were the juices of the corn when it was placed in the cans?

223 Ans. In the can, as far as practicable.

Int. 14. What office did the juices perform when thus placed in the can, as far as practicable; and when not practicable, what did you do to remedy the absence of the juices?

Ans. We put in all the juices that did not escape in removing the corn from the ear, and did nothing to supply the place of those which might have escaped.

Int. 15. Do you consider this process the best for the preservation of corn, and did you so consider it in 1849?

Ans. I did then and do now.

Int. 16. Why did you then make the experiments upon other methods, of which you speak as having made experiments in '49 and '50 in interrogatory 11?

Ans. I am not aware that I made any experiments on corn in '49 or '50. I made them prior to those years.

Int. 17. Why did you return to the process of packing raw, which you speak of in answer to interrogatory 11th? When was this return made?

Ans. For the reason that from practical experience I was satisfied in my own mind that it was the best; probably in 1847 or '48—certainly as early as 1849.

Int. 18. What do you mean by "possibly," used in the 3d and 6th direct answers and others; do you know those facts, or do you not?

Ans. "Possibly" refers to the knowledge which I may have had of the matter at that date, but my bath-books prior to 1849 having been destroyed by fire or lost, makes me unable to be positive on dates until the year 1849.

Int. 19. What has your bath-book to do with the corn that was ordered from Treat, Noble & Co., referred to in the 3d answer above named?

Ans. My bath-book would have nothing to do with that corn; but in writing for the corn, certainly, in one instance, we described how it should be put up.

224 Int. 20. Please give the date of that instance, and what the described process was?

Ans. Aug. 14, 1844. Corn to be cut off the cob; remainder of process same as with other goods.

Int. 21. Did you receive the corn; and how doyou know that your orders as to process were complied with?

Ans. We did receive the corn, and were in the habit of opening sample

cans of orders so received, and of judging of the remainder from the condition of the contents of the cans so opened.

Int. 22. What do you mean by "undoubtedly" in your answer to the 2d direct? Do you know of any other time, or do you not? And did you ever attain that "possible excellence" of which you speak in the same answer? and, if yea, when?

Ans. I selected that time, 1849, only because I had evidence in my own handwriting fixing that date precisely; but I am sure evidence has been existing in my handwriting, of knowledge prior to that. I can swear that I had knowledge of the business prior to 1849. The last clause I cannot answer; but we have, we believe, attained as great excellence in putting up goods as any other manufacturer in the business.

Int. 23. What do you mean by "probably" in your 10th answer and others? Can you not reach any higher degree of assurance than a probability?

Ans. I mean to say that while I cannot be precise as to the amount put up, I have in my answer substantially covered the ground. I can.

Int. 24. What do you mean by the word "unquestionably" in your 12th answer, and by "little or no doubt" in same answer? Do you know those dates, or is that as you can get to certainty?

225 Ans. I have written evidence satisfying my own mind as to 1849, and know that evidence has been in existence which would show an earlier date.

Int. 25. What is that written evidence of 1849? Who wrote it? Produce it and annex it to this deposition. What was that evidence of an earlier date; who wrote it; how was it lost?

Ans. In part in my bath-book, and also in memorandum-book. I wrote it. I think I can produce my bath-book, and I may be able to produce my memorandum-book. My bath-book I have seen recently, but I have not seen my memorandum-book for some years. A bath-book, which was either destroyed by fire or lost. Part of the bath-book would be in my handwriting—possibly the whole of it.

Int. 26. How much corn did you pack in 1850; when was it packed; who was present with you; where did you get the raw material; to whom was it disposed of; what record have you of it?

Ans. I do not know. I do not remember positively that I packed any in 1850, although I may have done so.

Int. 27. Don't you know that you did not pack any in 1850?

Ans. No; I do not know.

Int. 28. Did you not have bath-books or memorandums in 1850?

Ans. Yes.

Int. 29. Then why is your memory so clear and your testimony so much more positive of 1849 than 1850?

Ans. For the reason that I wished to become possessed of an accurate knowledge of the earliest date concerning which I had written evidence of my having put up green corn, and rested satisfied with what I found and have stated.

Int. 30. Do you, then, testify that you can so clearly remember of your packing in 1849, and in the next year cannot say whether you packed or not?

226 Ans. I mean to state that my memory furnishes me with evidence of having packed corn on many occasions, and that the date fixed—1849—merely indicates precisely the date of one of these occasions, I being unable to fix as precisely the dates of other occasions.

Int. 31. Did you pack any corn in 1851?

Ans. I cannot answer positively. I should think not, as I believe I was that time otherwise occupied.

Int. 32. When did you first purchase corn of Mr. Winslow or of Jones?

Ans. I really cannot answer that question.

Int. 33. Did you buy of Jones last year or the year before? Give an account of your purchases from N. Winslow or Jones.

Ans. I can say we did not buy of him last year, and do not think we bought of him the year before, although we may have had some of his goods. I am unprepared to give any other account than is shown in exhibits marked A, B, C, and D, attached to this deposition.

Int. 34. When did you first buy of N. Winslow; when first of J. W. Jones? Of whom have you purchased corn since 1851 besides Winslow or Jones?

Ans. I cannot state exactly as to either party. I at this moment recollect but three parties besides them, to wit, Ring, Davis, Baxter & Co., Burnham & Morrill.

Int. 35. How much, or about how much, from each; in what years, or, as near as you can say, what years?

Ans. I really cannot state—many hundreds of cases. We have bought more or less of these parties, or others, during the past fifteen years.

Int. 36. Have you not purchased all your corn from various packers during that time?

Ans. We have not purchased all our corn from other parties during that time, although we have purchased the bulk of it.

227 Int. 37. How much corn did you put up in 1852? What proportion of your sales? Same inquiry as to 1851, '53, '54, 55.

Ans. I cannot say how much was put up in 1852; I cannot say what proportion; I cannot state as to 1851; I cannot state as to either question for years 1851–'55. Probably not much was put up in '53, '54, or '55.

Int. 38. Are you prepared to show any exhibit or copy, or anything else, of any corn you have packed, except the exhibit or copy attached to your affidavit?

Ans. I am not.

Int. 39. How did you make your cans in 1849?

Ans. By employing tinsmiths to make them out of tin. The cans were constructed very similarly to those now in use.

Int. 40. Was it ten, fifteen, or twenty years ago that you first purchased of Winslow or Jones?

Ans. I cannot say when we first purchased of Winslow. It was fifteen or sixteen years ago. Of Jones, not so long ago.

Int. 41. Did any of the corn you packed in 1849 spoil?

Ans. I cannot say; possibly a few cans.

Int. 42. Can you not give a more definite idea—first, whether any spoiled, and then about how much?

Ans. I can only answer generally that we have had trouble with corn, as is the case with other manufacturers, but do not think we have had any more than they.

Int. 43. I am asking of 1849, and want your best and most definite recollection as to the subject of the last two inquiries.

Ans. I cannot answer more definitely than I have, not being aware that we have had any excess of trouble in this article in any one year over another.

228 Int. 44. Do you remember of a man by the name of Jeremiah Ford being in your factory? If so, did your corn spoil when he was there?

Ans. I believe he was in our employment for a short time, but whether we had any corn spoil while he was in our employment I cannot say.

Int. 45. Did the corn you put up that year spoil?

Ans. I cannot say; possibly a small portion of it spoiled, possibly none.

Int. 46. How was the corn packed while Ford was with you? Give the process.

Ans. I cannot say that any corn was packed while he was with us.

Int. 47. Do you not know that none was packed at that time?

Ans. No.

Int. 48. Do you know that there was any packed when Ford was with you?

Ans. I have no memory in the matter whatever.

Int. 49. Do you profess to understand practically the art of preserving green corn?

Ans. I do.

Int. 50. Why would not the corn keep if packed raw and not bathed and hermetically sealed?

Ans. Because of the pressure of air in the can.

Int. 51. What effect to contribute to preservation has the bathing upon the kernels?

Ans. The process of bathing relieves the can of a given amount of air, and so changes the nature of what remains in the can as to prevent its injuring the contents.

Int. 52. What change takes place in the air that remains in the can?

Ans. I cannot tell you.

Int. 53. Then, how do you know, since you are ignorant of the reason, that bathing so changes the air in the can as that it does not injure the corn?

229 Ans. Because we know that without the continued application of heat the corn will not keep; with it, it will keep.

Int. 54. Does that explain why heat so changes the air in the cans that it does not injure the corn?

Ans. It explains it as near as I am able to explain it.

Int. 55. What portion of your factory was injured by fire?

Ans. None of the factory.

Int. 57. What portion of your buildings connected with your business was injured by the fire of which you have spoken in your testimony?

Ans. The building 67 Broad street, Boston, and building in the rear of it, on Battery March street.

Int 58. What is that building in Broad street—for what purpose used? What is the building in the rear—for what purpose used? Where was your factory at the time the fire took place?

Ans. The building on Broad street is used as store-house, sales-room, and counting-room. The building in the rear we did some packing in, and we likewise had a counting-room in it. One of our factories was at Charlestown.

Int. 59. What portion of these buildings was destroyed or injured by fire? Describe the injury and its extent.

Ans. The upper portion of the buildings was destroyed by fire, and the buildings were wet throughout by water. The rear building had the roof and possibly two upper stories crushed by a falling wall, and the front building to some extent by the same cause. The fire originated in our neighbors, and spread all around us.

Int. 60. Can you tell by what process corn is packed by opening a can and examining the contents some considerable time after packing? If so, state how and why can you thus tell.

230 Ans. You could have a good general idea by the appearance and taste of the corn.

Int. 61. Will you annex your affidavit which you have already given in this case to this deposition?

Ans. I have no objection to annex anything relating to the case to which I have sworn, and of which I have the disposition. I have not the original or a copy thereof.

Int. 62. Is not preserved green corn now an article of great marketable value?

Ans. It is.

Int. 63. Is not your firm an old one, and has it not an extensive business in preserved articles of food and other preserved articles?

Ans. It is an old one, and has an extensive business as referred to.

Int. 64. What use is made of a bath-book? In what room in the factory is it used? Explain its use and the memoranda that are kept in it.

Ans. It is a record made of what is put up daily; there may be two or three kept by different bath-men; in the counting-room of the factory, or in the bath-man's desk, if he has one.

Int. 64. What was the building in the rear of the building in Broad street used for? What was packed there? When was the corn-packing done?

Ans. For storing and packing goods, and as a counting-room; bottled goods; we packed corn at Charlestown, Mass. When we packed canned goods in Boston we did so in another building, which we did not occupy at the time of the fire.

Int. 65. What proportion of the corn you sold did you pack in the years from 1855 to '60? If you cannot state exactly, state as near as you can, and state of whom you bought same from 1860 to '65; same from '65 to '70.

231 Ans. A very small proportion, indeed; I cannot state any closer than I have done, as I have not been manufacturing partner since '57. We bought of Nathan Winslow & Co., and I cannot positively state now the name of any other party of whom we bought. In years from 1860 to '65, I cannot say how large a proportion we packed; not much; we bought ('60–'65) of J. W. Jones, and of other parties probably; whom, I cannot say. In years from 1865 to '70 we packed but a very small amount of what we sold, and have bought the canned corn of various manufactories.

Direct resumed:

Int. 1. Why did you give up packing green corn?

Ans. In the years '51 or '52 our business grew so very large as to compel us to pay closer attention to certain branches of it; to do that we had to relinquish the manufacture of certain goods that previously we had put up for own sales. Among the goods, the manufacture of which we so relinquished in toto, or in great part, was green corn, it interfering as to season of putting up with the manufacture of other goods, that we at that time regarded of more importance. We have not since resumed the putting up of corn to any great extent, for the reason that we continue, at the period where it is fit to put up, to be too much occupied by other manufactures, and can always fully supply ourselves with a good article from other manufacturers.

Int. 2. How did it happen that your bath-books were destroyed or lost in the fire?

Ans. In 1857, when I relinquished the position of merely manufacturing-partner, and took the general superintendence of the whole business, I brought with me to my headquarters in Boston my bath-books and private memorandum-books that I had used in the factory in
232 Charlestown, and stored them in the upper part of the building, 67 Broad street, which was injured by fire, as before described, as I believe, in the spring of 1862. My papers and books were scattered and wet; some also burnt.

CHARLES J. UNDERWOOD.

On your return to Boston, will you find the bath-book referred to in this deposition, and send it to the commissioner to be annexed hereto?

Ans. I will.

CHARLES J. UNDERWOOD.

EXHIBIT A.

PORTLAND, *Dec.* 15, 1855.

Messrs. Wm. Underwood & Co. bought of Nathan Winslow & Co.:

50 dozen 1½ cans green corn, a $3.75 ..... $187.50
(6 months from Dec. 15, '55.)
Payment received.

NATHAN WINSLOW & CO.

EXHIBIT B.

Messrs. W. Underwood & Co. bought of N. Winslow & Co.:

1857.				
Aug. 31.	100 doz. cans green corn		$3 50	
	100 " " " peas		$3 50	
				$700 00
Cr.	(6 mos.)			
By	$\frac{7}{12}$ doz. 2 lb. turkey spoiled, (Lamback & Cooper)		$3 64	
	$\frac{7}{12}$ doz. 2 lb. peas spoiled, (J. & J. J. Norment)		2 18	
	6½ doz. 2-lb. corn spoiled, (Lackland, H. & T)		24 37	
233	Freight and charges		1 50	
	⅓ doz. 2-lb. corn spoiled, (Farley, James & Co.)		1 17	
	6 doz. 2-lb peas spoiled, (Vance & Bro.)		21 00	
	16 doz. 2-lb. chicken, &c., (B. W. Stone)		100 00	
	12 doz. 2-lb. corn, (B. W. Stone)		45 00	
	Freight and charges		80 60	
				$279 46
				$420 54

EXHIBIT C.

Messrs. Wm. Underwood & Co. to John W. Jones, DR.

1860.				
Sept. 17.	To 100 doz. 1½ lb. cans corn, 3		$300 00	
18.	" 100 " " " " " "		300 00	
Oct. 1.	" 120 " " " " lb'ld, "		360 00	
				$960 00

EXHIBIT D.

PORTLAND, *Nov.* 22, 1862.

Messrs. Wm. Underwood & Co. bought of John W. Jones, successor to Nathan Winslow & Co., packer and dealer in hermetically-sealed green corn and other vegetables, meats, fish, pickles, preserves, &c., No. 10½ Union Wharf, Portland, Me.:

50 cases green corn, 100 doz., a $3.00	$300 00
100 " " peas, 200 " a 3.00	600 00
Carting to steamer	3 00
	$903 00

Portland, rec'd paym't by note 6 months.

J. W. JONES.

234 *Deposition of Aaron Ring, for respondent, taken*

Int. 1. Please state your age, residence, and occupation.

Ans. My age is 53 years. Wiscasset is my residence at present. For the last eighteen years I have been in the hermetically-sealing business, packing goods in tin cans, more or less, with the exception of a few years I was in the Army.

2. In the packing of hermetically-sealed goods, state whether or not you have been the processor.

Ans. I have.

3. What kinds of hermetically-sealed goods have you manufactured; and when, where, and how did you learn the art?

Ans. I have manufactured meats, fish, vegetables, including corn, peas, beans, and soups, and squash and potatoes and pumpkin, milk and berries, &c. In 1849 I made up my mind to go into the business, and went on to Boston and purchased some cans of goods of Underwood already put up. I examined them very closely to see if I could discover the process. I discovered an air-hole in the top of the can, which, to all appearance, had been opened and restopped. I came to that conclusion from the fact that the spot on the old place was not so large as the old spot; was a smaller spot of solder. I then made some tin cans, got some lobster, and tried the experiment. I boiled the cans and contents in hot water about an hour and a half, and then opened them, restopped them so soon as the air had escaped and put them into the hot water again, and cooked them about two hours. I then hoisted them out and allowed them to cool off. As they cooled off, the ends of the cans went in and became concave, which was the appearance of the Underwood goods when I bought them. I showed some of the
235 goods to a workman, who was then to work for Lewis, on the wharf in Portland, in the hermetical business, and asked his opinion of the goods and of the contents of the cans. He pronounced them all right, and said I was correct in my operation. He opened a can and looked at the contents. I got the time of the boiling from hearsay. It was common talk among the workmen at Lewis's that they cooked them about five hours; and in the course of the cooking they went into the room where they were cooking, and were there about half an hour, doing something, they did not know what. I got the idea of the time from that. I also read an account of Mr. Appert's operations in France, from which I gained some information.

There was a man named Barberick, who was putting up beef and poultry, and I went to work for him making tin cans. In preparing

cans after his directions I was ordered to make holes in the cover and stop the holes up again. On two of the cans I put a spot on the cans as if there was a hole in the covers, but there was no hole; I did it for my own information. After they had cooked the cans the usual while in warm water, old Mr. Barberick came in and found a good deal of fault because I had not made the holes larger in two of the cans. He said the holes were so small he could do nothing with them. I told him I would be more careful in future. I think I worked for him about two months in the early months of 1850, and in the fall of 1849. I then went to work for myself in putting up hermetically-sealed provisions. After working on my account two or three months, Mr. Oliver M. Hartshorn, or his boy, came out and wished to go into partnership with me, and in April, 1850, I think it was, Henry Martin Hartshorn and I formed a copartnership for the purpose of putting up hermetically-sealed goods in Portland.

4. Have you done anything in the preservation of corn in its green state; and, if yea, when did you first do it; by what process or processes, and with what results?

236 Ans. I have. I first did it in 1850. In the first place I took the corn from the cob, shelling it off with the back of a knife, each row at a time, putting it into the cans and sealing them up and recooking in the cans; some of them I did not open or puncture at all; others I would puncture. I then packed the ears of corn in the green state whole in the cans, after husking and taking off a little of the end, putting as many into a can as I could; then filling up the interstices with shelled or cut corn, cut green from the cob. Some of it I punctured in the cans after cooking, and some of it I did not puncture. I then cut the corn from the cob in the milky state, and packed it in tin cans, and some of it I would puncture and some I would not.

I found that corn packed in the green state strained my cans very much, and I then scalded the corn in a green state, half a bushel at a time, and packed it in the cans while hot; hermetically sealed it; some of it I punctured and some I did not. The corn which I cooked most of it spoiled, that which I cooked in the can without puncturing. The corn which was put up in cans and punctured after boiling was the most reliable in a commercial point of view; stood the best in the market and on foreign voyages. The most of my corn which I put up that season, to wit, 1850, was first cut from the cob in a green state, boiled in kettles, half a bushel at a time, packed in tin cans, hermetically sealed, reboiled and punctured, restopped, and reboiled again two hours and a half after the puncture and two hours and a half before. I also packed at that time corn boiled in the kettles and cut from the cob in the milky state, put into the tin cans as hot as we could dip it in, hermetically sealed immediately; reboiled three hours without puncturing. This last-named corn opened very nice, but I was afraid to go into it on a large scale commercially, because a great deal was supposed to depend upon the puncturing at that time. The next year, in 1851, we
237 went into the corn business larger, and every succeeding year more and more, as we could obtain corn, up to 1856.

5. State whether or not you were the processor of Henry Clark in preserving green corn, and conducted all the processes for him in putting up the corn, on account of which the pending suit was brought against Clark; and, if yea, state by what processes you put it up.

Ans. I was the processor of Henry Clark. I did conduct all the processes. I put it up by two processes, as heretofore described in this

deposition. By one process I cut the corn from the cob in the milky state and put it into the kettles, half a bushel in a mass; brought it to a scald in its own milk and then packed while hot; hermetically sealed so soon as possible, and reboiled in the cans without puncturing. I put up for Mr. Clark 15,800 cans in that way, not one can of which, so far as heard from, spoiled. We put up some 800 cans of the green corn, cut from the cob raw in a milky state and packed into cans uncooked, hermetically sealed, put in a kettle and boiled two hours; hoisted out and punctured; resealed and reboiled three hours.

6. State whether or not you have put up corn, preserved green, for J. Winslow Jones and his associates, under the Winslow-patent processes; and, if yea, about how much.

(Objected to as immaterial.)

Ans. I have put up corn and sold it to J. Winslow Jones & Co.; I have put up corn for the company under the (so called) Winslow patent.

7. State whether or not you have heretofore put up corn under the last process described by you in the Clark case, and before that time; and, if yea, when and about how much.

Ans. I put up in 1851, 1852, 1853, 1854, in that way; more or less every year. I think I put up in 1854 in that way about 40,000
238 cans. In 1853 I put up about 20,000 cans in that way. In 1852 about 16,000 or 18,000 cans. In 1851 about 800 to 1,100 cans in that way.

8. Are you practically acquainted with and have you put up corn preserved green under the Durand process, so called; and, if yea, will you state what, if any, difference there is between said Durand processes, so called, and the Winslow processes in their mechanical and practical results and products?

(Objected to as calling for a construction of patents, and also as calling for expert testimony, and deponent not having qualified.)

Ans. I have put up corn under what I believe to be the Durand process, as I understand it; and I have also put up under what they say is the Winslow process. When cooked the same length of time, vented and recooked the same length of time, I do not think there can be any difference in the result, or in the resulting compound in the can. The manipulation of both processes seem to be about the same, and the resulting product the same when manipulated alike.

9. Have you experimented with and compared the products of the two processes in the particulars referred to in the 8th interrogatory? and, if yea, state how you have found them.

(Objected to as calling for expert testimony, deponent not having qualified,)

Ans. I have; if lightly cooked, the products were alike good; if cooked for a long time, four or five hours, the products would have a charred appearance in both cases. Two hours and a half cooking would coagulate the albumen and leave the product of a very natural and good color and appearance; anything less than cooking enough to coagulate the albumen would leave the contents liable to spoil in the can, even though hermetically sealed.

10. Did you know Henry Evans and of his operations in Portland in 1849; and, if yea, did he transact any business in the corn-packing business?

239 Ans. I knew a man they called Henry Evans, engaged in the packing business, as agent or operator or proprietor, on old custom-house wharf, in Portland. In going into the country for corn I

would hear the farmers saying that they sold their corn to Evans, but I don't know whether he ever preserved any or not.

(Objected to as hearsay.)

11. In the course of your business, in putting up green corn and preserving the same, have you met with Isaac Winslow and his associate, J. W. Jones, in the business? and, if yea, please state when, where, and what was said and done between yourself and these parties in relation to the packing of green corn.

Ans. In 1851, 1852, and 1853, Mr. Nathan Winslow was in the place where I was doing business, and he looked at some of my goods, and asked me where I found a market. I told him I was under a contract for all I could put up for the year, but I did not tell him with whom I had contracted. In looking at the corn and other goods, he said he did not look for a market in this country; that he shipped all he put up to his brother Isaac, in France. He asked me why I did not put it up as he did his, without the puncture of the can after the corn was in. I told him it was impossible to tell the good from the bad corn when put up in that way, owing to the convex ends, and as I was putting it up for parties in New York, I chose to put it up so that it would collapse. He said he knew it was the right way, because his brother Isaac got it from a packing-house in France, and he had no doubt it was right. I immediately replied, you have bad luck; you lose more than half of yours, I am told. Well, said he, the other half is worth three times as much as all yours; and he gave me an order on his clerk, Whittier, for three cans of his good corn. I presented the order, got the cans, and opened them. One was excellent, the other two were worthless.

240 Mr. Jones was in there about that time, 1852 or 1853, and wanted to go into partnership with me, and asked if I did not want more capital. I told him, not then. He said then he should go alone, for he did not like Mr. Winslow's way. He wanted to vent the cans and Mr. Winslow did not want him to. Neither Winslow nor Jones objected to my putting up corn in that way if I wished to. They said nothing about any patent or any expectation of any; but Nathan Winslow tried to persuade me to put it up as he did.

I saw Mr. Jones for four or five years, three or four times a year, after he went into the business, and there was no mention to me of any patent. By Mr. Winslow I mean Nathan. I do not know that I ever saw Isaac to know him.

(Answer objected to as immaterial, not affecting the right of the inventor, the said Nathan Winslow and John W. Jones not being the inventor.)

Cross-examined by Mr. Clifford:

Int. 1. Where were you when you experimented with the lobster in 1849?

(Objected to as immaterial.)

Ans. At Westbrook.

Int. 2. How much salt is ordinarily put into a one-pound can of meat?

(Objected to as before.)

Ans. I never put in any. I prepared mine at that time perfectly fresh.

Int. 3. How did you make the liquor or gravy in which the meats were placed in the cans?

(Objected to as before.)

Ans. I made it from the gluten that came from the meat, and the marrow from the bones, and fresh water as pure as I could get, and put on the label, "Salt or season to suit the taste."

Int. 4. How did you extract the juices from the bones, and how the marrow?

(Objected to as before.).

Ans. By breaking up the bones and putting them into a cauld-
241 ron-kettle containing some water, putting on a wooden cover, and bracing it down as tight as we could, and building up a hot fire underneath.

(Objected to as before.)

Int. 5. How long did you thus boil the contents? How did you place this with the meats in the cans, and to what temperature did you raise the liquor in the vat or boiler?

(Objected to as before.)

Ans. We boiled the contents some two or three hours, and then let it remain in the kettle all night with what embers there were under the kettle; and in the morning we started up fire enough to melt the contents of the kettle, and while melting we would take off the grease from the top; then we took the glutenous matter, and, after putting the meat into the cans, put in this matter to fill up the interstices not filled by the meat.

Int. 6. Did you put this liquor into the cans without any spice or pepper or salt?

(Objected to as before.)

Ans. I did.

Int. 7. How came you to try the putting of the corn into cans raw and packing by the so-called Winslow process in 1851, as you have stated? What first directed your attention thereto?

Ans. I put it up in some five or eight different ways, in search of the best one.

Int. 8. How much did you put up by this process in 1851; when did you try the raw material; to whom did you sell it?

Ans. I put up by that process, I should think, 400 or 500 cans; I bought the raw material in the market, at Westbrook, of Mr. Edward Payson; at Yarmouth, of a couple of farmers there; my impression is that I had about two acres of Mr. Edward Payson. I sold to Mr. Alpheus Fobes, and to a man named Jewett, a commission-merchant in Portland; I suppose I sold some to Alfred Butler.

Int. 9. Who helped you to pack this corn in this way?

242 Ans. Mr. William Trundy, Mr. William Trundy, jr., my brother, Mr. Elias Legrow; don't seem to recollect any more.

Int. 10. In what manner did you prepare the liquor or gravy, for the fish you packed?

(Objected to as immaterial.)

Ans. I put in clear fresh water with a little salt in it; I also got the gelatine from the head of the fish, by extracting it in the kettle, putting in a little salt; I then put it into the can.

Int. 11. To whom did you sell the 800 cans of corn which you disclose in your answer as packed by the Winslow process?

Ans. A part of it, I think, went to a man named Jewett; could not say how much without the book; a part of it to a man named Alfred Butler, in Portland; a part of it to William Taylor, in Providence, R. I.; and the rest to Alpheus Fobes, the greater part I think.

Int. 12. Where did you pack the corn by putting into cans on the cob, filling the spaces with raw kernels; how much did you thus pack; who was with you or knew of it; to whom was this corn sold?

Ans. In Portland; did not pack thus a very large amount, perhaps about a hundred cans; Mr. Henry Martin Hartshorn knew of it, I sup-

pose; Mr. Legrow knew of it, I think, am not positive; old Mr. Oliver S. Hartshorn knew of it. What remained after we had taken home; the rest went into the general stock, and was sold to the parties to whom I have referred.

Int. 13. Is not the so-called Winslow process now generally in use by packers in this country?

Ans. I should think it was; yes, sir.

Int. 14. How much did you put up by packing into cans raw, sealing, boiling, and venting in 1852; to whom was it sold; where was your factory; who were at work in your shop then and knew of it?

243 Ans. I should think from 800 to 1,100 cans, to the best of my remembrance; think it was sold to Alpheus Fobes, Thomas Kensett; think I sold to Kemp & Day, and to another house with whom Mr. Rumery was acting as clerk; don't remember the name; think I sold some to Mr. Bonard. I now remember the name of the house referred to, it was Wells, Miller & Provost, of New York City. My factory was in Portland, on Burnham's wharf; Elias Legrow, Wm. Trundy, my brother, and a woman by the name of Ring, was in shop and knew of it; don't seem to recollect the names of the others.

Int. 15. How much water did you put into a one-pound can of peas? (Objected to as immaterial.)

Ans. I put all the peas I could get into the can and then filled up with fresh water, when I packed peas raw; when I cooked before packing, did not put in any water; juice from the peas was sufficient.

Int. 16. How did you cut the corn from the cob in 1851 and 1852; with what sort of an instrument; and how and with what sort of an instrument did you and Clark cut it off?

Ans. I cut it in 1851 and 1852 with a common shoemaker's knife. If it was pretty ripe and out of the milk, would pry it off with the back of the knife. The object at that time was to preserve the kernels as whole as we could. When the corn was in the milk and we could not get them off without squashing them, we would cut them off with the sharp edge of the knife; then we would turn the other edge of the knife and scrape the juice that remained off from the cob. I and Clark cut it off with a straight knife. When it was cut off with the sharp edge of the knife we tried to keep the kernels as whole as we could.

Int. 17. Did you or not hear in 1851–1852 that Mr. Winslow had

244 applied for a patent; and was he not then known among packers as a man who asserted that he had invented a new process?

Ans. I heard sometime between 1850 and 1856 that Mr. Winslow was going to get out a patent for packing corn, Nathan Winslow. This was all hearsay. I do not think it was so early as 1851; think it was in 1852 or 1853. There was a report of that kind.

AARON RING.

Deposition of George W. Day, for respondent, taken May 1, 1871.

Int. 1. What is your name, age, place of residence, and business?

Int. 2. State whether or not, as a dealer in hermetically-sealed goods, you have found upon the market corn preserved green in tin cans; and if yea, about when did you first find said article in the trade; and in what quantities, and by whom put up and sealed. Give the names of the manufacturers, if you can remember.

Int. 3. State whether or not you have found the Winslow corn in market for sale; and if yea, about when and where did you see it; in what quantities; how labeled; and whether any claims as an article of pat-

ented right were set up for it, or anything upon or in the packages, showing that it either was or was not intended to be a patented article.

Int. 4. State whether or not Nathan Winslow's name appeared on these packages of corn preserved green, exclusively as the manufacturer thereof; and if corn of other packers and manufacturers so preserved was also in the market; and if green corn so preserved
245 by Aaron Ring, Treat, Noble & Co. appeared on the market and in the trade; and if other manufacturers, please name them.

Int. 5. Please state the general extent of the trade and business relations in the article of corn preserved green, if you know; and whether you have given your affidavit in the preliminary hearing of this case; and whether the same is true and may be appended to this deposition.

Cross-interrogatories proposed to Geo. W. Day:

Int. 1. At what time did you first commence preserving green corn, and where?

Int. 2. State what process you first employed in 1853 to preserve corn.

Int. 3. State what year you found canned corn in the market marked "Nathan Winslow."

Int. 4. State what year you first saw the Treat, Ring and Kensett & Co.'s corn in the market, and where you saw it.

Int. 5. Has or not corn preserved in tin cans, in green state, now become a valuable article of merchandise?

Int. 6. Will you please attach to this deposition a copy of your affidavit given in this case April 6, 1870?

Int. 7. Prior to 1850, how largely was preserved corn in the market; and were you able to tell or did you know by what process it was preserved and prepared? If yea, state by what process, and how you were able to learn the same.

GEORGE W. DAY, of New York City, aged 47 years, being duly and publicly sworn and examined on the part of the respondent, deposes and says as follows:

In answer to the first interrogatory, he saith: My name is George W. Day; age, 47 years; place of business 116 Wall street; and my business is packer of preserved fruits and vegetables.

246 In answer to the second interrogatory, he saith: I have found upon the market corn preserved green in tin cans. I first found said article in the trade about twenty-five years ago; the quantity was not large, the demand at that time being small for such articles; said articles were at that time put up and sold by Nathan Winslow, Thomas Kensett & Co., a man by the name of Treat, and a man by the name of A. Ring. These parties were also the manufacturers of said cans; they had their names on such cans as such manufacturers.

In answer to the third interrogatory, he saith: I have found the Winslow corn in market for sale; I think it was in the year 1851 or '52 that I first saw it; it was in very small quantities; don't remember how it was labeled, but think it was labeled Nathan Winslow; there were no claims upon it that it was a patented article, nor was there anything upon it or the packages, to my knowledge, showing that it was or was intended to be a patented article.

In answer to the fourth interrogatory, he saith: I have already answered this interrogatory in my answer to the second interrogatory.

In answer to the fifth interrogatory, he saith: The general extent of the trade and business in the article of corn, preserved green, is very

heavy, the sales being very large. I did make an affidavit in this case on the preliminary hearing; the same was true, and it may be appended to this deposition.

In answer to the first cross-interrogatory, he saith: I first commenced preserving green corn about the year 1852 or '53, in Portland, Maine.

In answer to the second cross-interrogatory, he saith: The process
247 was to cut the corn from the cob, put it into the can, seal it up, bath three hours, then drain the bath and rebath it two hours.

In answer to the third cross-interrogatory, he saith: I found canned corn in the market marked Nathan Winslow, about the years 1850 or 1851.

In answer to the fourth cross interrogatory, he saith: I cannot state the year exactly, but I think it was about the year 1848 that I first saw the Treat, Ring and Kensett & Co.'s corn in the market; I saw it in New York at that time.

In answer to the fifth cross-interrogatory, he saith: Corn preserved in tin cans in green state has now become a very valuable article of merchandise.

In answer to the sixth cross-interrogatory, he saith: I cannot attach the copy of affidavit asked for in this interrogatory, as I have not seen it since I made it. I presume it is on file in the preliminary proceedings in this case.

In answer to the seventh cross-interrogatory, he saith: Prior to 1850 the packing of preserved corn was very small in the market. It was all preserved and prepared by the same process that I used in 1852 or 1853, except Nathan Winslow's, who did not drain his baths. He was astonished when I told him how I processed my corn, and he said I would lose all the milk.

GEORGE W. DAY.

248 *Deposition of Samuel S. Pierce, for respondent, taken June* 28, 1871.

Int. 1. What is your name, age, residence, and business?

Int. 2. Have you found the article of corn preserved green in market and dealt in the same as a part of your trade?

Int. 3. Who put the said corn into market; how was it put up; what labels were on the packages, if any? Please state fully the purport thereof.

Int. 4. Were you acquainted with Nathan or Isaac Winslow; and if yea, how often have you met either of them personally; and have you purchased corn of their manufacture, or of either of them; and if yea, when and how much; and was there anything distinguishing their goods as a patented article, or in that respect as separating the goods of their manufacture from the goods of other parties? State whether or not you were ever informed by either of them that they had or claimed any private and especial right or interest in the manufacture of said goods.

(Objected to as immaterial and incompetent.)

Cross-interrogatories:

Int. 1. If, in answer to interrogatory 2, direct, you state that you have so found corn preserved in the market as an article of trade, state where you first saw the same; when; what marks or labels the said cans bore; and what quantity there was; and where it came from.

Int. 2. Do you know by what process the same was preserved? and if yea, state how you were able to determine what the process was.

Int. 3. Did you ever know or have you ever seen Isaac Winslow?

Int. 4. Did you ever know and have you ever seen Nathan Winslow?

249 Int. 5. Did you ever see any canned corn with the name of Isaac Winslow thereon; or did you ever know of his packing any green corn by any process and selling the same in the market at any time?

Int. 6. Did you not make an affidavit before a commissioner to be used at the preliminary hearing in this case; and will you not attach the same, or a copy thereof, to this deposition?

Int. 7. State when, if ever, you first learned the Winslow method or process of preserving green corn; where and from whom?

The answers of Samuel S. Pierce to the interrogatories filed by respondent in the above-entitled suit.

To interrogatory 1, witness answers: My name is Samuel S. Pierce; age, sixty-four years; reside in Union Park, in the city of Boston. I am a grocer. I have been in that business thirty-nine years.

To interrogatory 2, witness answers: Yes, sir; I have.

To interrogatory 3, witness answers: Nathan Winslow, of Portland, Maine, first put it into the market, so far as I know or ever heard. It was put up in tin cans. It was labeled something like this, as I remember. It was a printed label pasted on the cans with these words: "Prepared Sweet Corn, by Nathan Winslow, of Portland, Maine." These were the words, as near as I recollect. There was no reference to any patent, that I recollect.

(Objected to as irrelevant.)

To interrogatory 4, witness answers: I am acquainted with Nathan Winslow, but not with Isaac Winslow. I have met Nathan Wins-

250 low as often as three or four times a year for fifteen years previous to his death. I have heard Nathan speak of his brother, but never saw him. For many years I knew of no other canned goods but those of Mr. Winslow. I purchased of Nathan Winslow preserved green corn, of his preparation, until he died. There was no other preserved green corn in the market but Nathan Winslow's while he lived, so far as I recollect. Mr. Nathan Winslow never stated to me that he had a patent on the article of preserved corn, or that he had any special right in the preparation of it. I was quite surprised when I heard recently that it was claimed as a patented article.

The answers of Samuel S. Pierce to the cross-interrogatories propounded to him by Mr. Henry Clifford, counsel for complainants.

To cross-interrogatory 1, witness answers: I saw it at my own place of business in Boston first in 1848. Of this date I am certain. I may have heard of it before. It was in two-pound cans, and bore a printed label having these words: "Prepared Sweet Corn, by Nathan Winslow, Portland, Me." This corn came direct to me from Mr. Winslow, of Portland.

To cross-interrogatory 2, witness answers: No, I do not.

To cross-interrogatory 3, witness answers: I never knew him, or saw him, as I have before stated.

To cross-interrogatory 4, witness answers: Yes, sir, I knew him. I first knew him in 1848, when I bought corn of him. He then came to my store to sell me his preserved corn. He came three or four times a year ever after, as long as he lived, to sell me corn and salmon.

251 To cross-interrogatory 5, witness answers: No, sir, I never did.

I never knew that Isaac Winslow had anything to do with preserved corn.

To cross-interrogatory 6, witness answers: Yes, sir. I made an affidavit; but I have neither the original or a copy.

To cross-interrogatory 7, witness answers: I did not know his method or process, as I have before stated.

SAMUEL S. PIERCE.

Additional deposition of Samuel S. Pierce for respondent, taken July 7, 1871.

By Mr. Sewall:

Int. 1. Please look at Exhibit A and state if you ever before saw it; and if yea, state in whose handwriting and signature it is, and attach the same to this deposition.

(Objected to as immaterial. Exhibit objected to.)

Ans. I have seen it before. It is a bill of one dozen of Winslow's preserved corn, and receipted by Nathan Winslow; also made by him; his writing.

Int. 2. State whether or not the transaction indicated in this exhibit was the beginning of your dealing with Nathan Winslow in sweet corn.

(Objected to as immaterial.)

Ans. I think it was.

Int. 3. State if you can, in round numbers, about how many dozen of canned corn you have purchased and sold of the Winslow packing.

252 Ans. About 3,000 dozen of Nathan Winslow.

(Objected to as immaterial.)

Cross-examined by Mr. Clifford:

Int. 1. Did you ever buy any corn of Isaac Winslow, or any bearing his name?

Ans. No, sir.

Int. 2. How much did you buy of Nathan in '49–50–51–52–53?

Ans. In '49 about 50 dozen; about the same in '50; in '51 about 100 dozen; in '52 about the same; about the same. The bill of 1848 was a sample, to see if the goods could be sold in the market. I bought from two to three hundred dozen of Nathan as long as he lived. This was the first I ever heard or saw of preserved corn.

Int. 3. Do you know by what process the corn you bought of Nathan Winslow was preserved?

Ans. I do not.

Int. 4. Did not Mr. Nathan Winslow desire to ascertain if this canned corn was capable of being sold in market?

Ans. I should say it was not his desire, but mine, as I went to him to get his corn; he did not come to me; I made the first advance.

Direct resumed:

Int. 1. Did you or not know, previously to your purchase of the Winslow corn, of its being sold in other places? and if yea, state where.

Ans. I did not.

Int. 2. State whether or not, in your transactions with Nathan Winslow, he told you of his corn being sold abroad by his brother Isaac; and if yea, please state fully what he told you about it.

(Objected to as hearsay and immaterial.)

Ans. Nathan Winslow told me about his brother in Paris, who
253 was married there. I do not know his name; and my impression is that he used to send the corn there to his brother to sell; I am not positive about this.

SAMUEL S. PIERCE.

A.

PORTLAND, *Feb.* 19, 1848.

Samuel S. Pierce, bought of Nathan Winslow:

One box of 1 doz, canisters preserved corn..... $4.00

Received payment.

With box. NATHAN WINSLOW.

Deposition of George F. Lewis, for respondent, taken July 6, 1871.

Int. 1. What is your age, residence, and occupation?

Ans. Am 62; reside in Portland, Me.; packer of hermetically-sealed goods.

Int. 2. How long have you been in said business, and in what capacity?

Ans. Since 1845, in Portland; I have been engaged in it as a regular business; put up some goods in Boston as early as 1843. Processor was my capacity. I did the work myself.

Int. 3. What kind of goods have you been engaged in putting up by this art? Describe particularly.

Ans. All kinds of meats, fish, both scale and shell-fish, vegetables, green peas, beans and corn, turnips, carrots and potatoes, parsnips, squash.

254 Int. 4. Will you please describe the process by which you have operated in the manufacture of the above-named hermetically-sealed goods?

Ans. We take green peas, shell them, put them into canisters, which are then soldered up air-tight, then immersed in a boiling-water bath for two hours and a half; they were then taken out, and the cans were punctured to allow the escape of gases or rarified air; sealed the puncture; they were then returned to the bath at the same heat (this is the process used in 1845–50; we have since improved on the process) for three hours; sometimes the cans were punctured twice, according to the seasons. At times they would not keep so well when punctured once as when punctured twice. In one year every one in the business lost large quantities of goods of all kinds, owing, I think, to some peculiarity of the season.

Int. 5. When, where, and from whom, did you learn the process of hermetically sealing goods.

(Objected to as immaterial.)

Ans. The first I knew of it was from reading M. Apert's work and also Ure's Chemical Dictionary, under subject fermentation, in Boston, about 1842–1845.

Int. 6. Where did you find corn preserved green first—in the market? and if yea, of whose manufacture and how put up.

Ans. We found these goods in the market, and bought and sold it before we went into business; of Treat, Noble & Co., of Eastport. It was put up in 2 lb. canisters mostly.

Int. 7. In what quantities did you deal in this article at this time?

Ans. As near as I can recollect, from 30 to 50 dozen per annum.

Int. 8. Are you acquainted with corn preserved green as a product of the Winslow process, so called; and if yea, have you examined, used, and compared the Winslow corn with that put up by Treat, Noble & Co., and others?

255 Ans. I am acquainted with it; and have examined and used the Winslow corn, and compared it with that of Treat, Noble & Co., and others.

Int. 9. State whether or not it is substantially the same product, as a marketable article?

(Objected to as incompetent.)

Ans. It is; and a better article than some put up by others more recently.

Int. 10. State whether or not the process you have described above is the same as used in preserving meats, shell and other fish, and vegetables.

Ans. It is.

(Objected to as incompetent.)

Int. 11. Have you known Jeremiah R. Ford? If so, when and where have you known him, and how was he engaged, and in what capacity?

Ans. I have; he was in my employ in 1850 and 1851, and at Eastport while in the employ of Treat, Noble & Co. He came from there to me. While in my employment, he was employed in outside work, such as boning meats, shelling lobster, &c., and filling cans, roasting meat, and chopping wood; preparing stuff to be put into the cans.

(Objected to as irrelevant and without foundation.)

Int. 12. Have you, among your other goods, put up corn preserved green; and if yea, how long have you been engaged in putting it up, and by what process? Describe particularly.

Ans. I have; from 1845 to 1865. In 1845 I used the same process in putting corn as in putting up other goods. Down to 1855 I steamed or blanched it on the cob. It was then put into the canisters. After shelling it from the cob the canisters were sealed up, then bathed in hot water for two hours and a half, then taken out and punctured or probed; re-sealed and immersed in the bath again for three hours. Never had any trouble in the corn keeping except in one season—I think in 1858 or '9.

256 Int. 13. How did you know the goods were in good marketable condition?

Ans. The heads of the cans came in, and sound leaden on being percussed.

Cross-examined by W. H. Clifford, esq.:

Int. 1. When did you first preserve green corn in cans by any process?

Ans. In 1846.

Int. 2. How long were you engaged in experiments before arriving at the process you thus first used?

Ans. About two years.

Int. 3. How was the corn prepared for placing into the cans by the process thus first used by you?

Ans. It was blanched and shelled off the cob before being put into the canisters.

Int. 4. Did you not boil the corn upon the ear before canning?

Ans. We did boil or steam it.

Int. 5. Was not the corn thus boiled or steamed cooked?

Ans. Partially.

Int. 6. Could green corn be immersed in boiling water or steam without coagulating the milk and juices?

Ans. It would coagulate them partially. It would then be partially cooked.

Int. 7. When did you first change from this process to the Winslow process, so called; i. e., cutting the kernels of corn from the cob in the raw state, putting them into cans raw, sealing the cans, and bathing the

contents, without any foreign admixture, and puncturing the cans after removal from the bath?

(Objected to as not inquired about in the direct examination, and as irresponsive thereto.)

Ans. In 1855 or 1856; I think 1855.

257 Int. 8. In your answer to the 12th direct you speak of a change of your process made in 1855; in what did that change consist?

Ans. In 1855 or '6 the change consisted in a change to the Winslow process, so called.

Int. 9. How long did you pursue this last process?

Ans. About 10 years, or as long after 1855 as I put up corn.

Int. 10. In what manner did you remove the corn from the cob after 1855?

Ans. Sometimes I used to shell it off whole, and sometimes cut it off with a knife. Some thought it looked better when shelled off, but was tenderer when cut off. It could be cut off faster than it could be shelled off, and for that reason we cut it off.

Int. 11. What other difference is there, if any, in the case of the preparation or in the effect of bathing, or in the keeping properties of the corn, between the cut kernels and those put into the cans whole?

Ans. No difference, as far as I know.

Int. 12. How does the air and gas escape from the cells of the whole kernels of corn when they are bathed?

Ans. The main channel of escape would be at the part at which it was disconnected from the cob; and it also would escape from all parts of the envelope.

Int. 13. How did you happen to change your process in 1855?

Ans. I cannot tell; it was practiced by others, and I had heard of it; I tried it and found it saved some labor—that of blanching it.

Int. 14. Was it then known to you, 1855, that Isaac Winslow had made application for a patent on the process?

Ans. No, sir. I think I had no knowledge of it as early as that.

Int. 15. Had you not heard in 1855 Isaac Winslow mentioned as the originator of this process?

258 Ans. Yes, sir.

Int. 16. From 1855 to 1865, did you ever return to the process of boiling before canning?

Ans. No, sir.

Int. 17. In the preservation of meats, what quantity of salt was usually added to a 1-pound can?

(Objected to as not relevant testimony and responsive to the direct examination.)

Ans. About half a teaspoonful.

Int. 18. How much spice, what spices, and how much gravy?

Ans. The gravy consisted of a gelatine extracted from the bones by steaming or boiling; it was not necessary to use it. With à la mode beef we used some black pepper; with beefsteak some salt and pepper.

Int. 19. Describe the manner of putting up the fowl.

(Objected to; same objection as to 17th cross-interrogatory.)

Ans. After the poultry was dressed, we carved it, put it into the cans, added a stuffing made of crackers, a little salt, pepper, and water.

Int. 20. Describe the method of putting up fish.

(Objected to; same objection as to the 17th cross-interrogatory.)

Ans. After cleaning, the fish was put into cans raw with a little salt, without water; salt is unnecessary.

Int. 21. Prior to 1852, what vegetables did you preserve by putting them into the cans raw, without any cooking or steaming?

Ans. Green peas and beans are all I recollect.

Int. 22. In a one-pound can of green peas, what weight of water did you put into the can, and how much salt?

Ans. From two to three ounces, and about a half teaspoonful of salt on an average; same quantities for beans. But the salt and water were both needless for the preservation of the article—put in to make weight.

259 Int. 23. How late in your packing corn after 1855 did you follow the practice of puncturing twice?

Ans. We were all the time experimenting, and I cannot recollect exactly, but I think in either 1855 or 1857.

Int. 24. Upon opening a can of preserved corn, do you pretend to be able to tell the precise process by which it was packed?

Ans. I could not.

Int. 25. State the effect, if any, upon green corn boiled on the cob and green corn cut off from the cob, and the kernels boiled both before putting into the cans.

(Objected to as irrelevant and irresponsive.)

Ans. When the corn is boiled on the cob it has no effect on the corn. The second method I never practiced, and don't know. The cob is sweeter to the taste when the corn is cut off.

Int. 26. When green corn is boiled on the cob and the kernels cut off and put into the cans, does the juice flow from the kernels with the same freedom as when the raw kernels are cut off and put into the cans?

(Same objection as to 24th cross int.)

Ans. I do not think it does.

Int. 27. In your answer to the 8th direct, you state that you have compared Winslow corn with that of Treat, Noble & Co. Explain what you mean by saying they are substantially the same product as a marketable article.

Ans. I consider it as merchantable an article as the Winslow corn, because it always kept, and his used to blow up.

Int. 28. At what date did you make the comparison of which you speak in your eighth direct?

Ans. Frequently from 1845 or '6 to 1850.

Int. 29. Were you acquainted with Isaac Winslow?

Ans. I never saw him.

260 Int. 30. Did you ever see a single can of corn with Isaac Winslow's name upon the same?

Ans. No, sir.

Int. 31. Did you ever see a single can of corn which, within your knowledge, was put with Isaac Winslow's consent or allowance?

Ans. No, sir.

Int. 32. Do you, or not, consider that there is any difference in the quality of the article of green preserved corn when cooked or steamed before canning, and when put into the cans raw in its own juices with no foreign admixtures?

Ans. That put into the cans raw is whiter than that steamed before canning. I have seen corn put up by Treat, Noble & Co. sweteer than that put up by the other process, and some as good.

Int. 33. Suppose green corn of the same quality and condition was properly packed in a proper condition, a part by boiling before canning, and a part by cutting it off the cob raw and placing it in the cans raw in its own juices, and without any foreign admixture, sealing up, bath-

ing and puncturing, would there be any difference between the two articles thus preserved?

Ans. As to its nutritious qualities no difference; the corn canned raw is whiter; the juices are saved as much in one process as in the other; I know of no other difference.

Int. 34. Prior to 1855, when you made the change in your process, did you put water with the corn; and if yea, to what extent?

Ans. We did; enough to make weight; from one to two ounces.

Int. 35. Did not Jeremiah R. Ford come down from Boston to Portland before he was employed by you?

Ans. Don't know.

Int. 36. Did you ever know Henry Evans? If yea, when and
261 where?

Ans. I knew there was such a man on custom-house wharf, in 1849 or 1850.

Int. 37. What was he doing?

Ans. There were three or four men there cracking lobsters, and putting them into the cans.

Int. 38. How many times were you into this shop?

Ans. I was in three or four times in 1849, as near as I can recollect.

Int. 39. Did you ever see any corn in that shop?

Ans. I never did.

Int. 40. Did you ever see any one of these three or four men packing corn in that shop?

Ans. I never did.

Int. 41. If corn had been put up in that shop, would you not have been likely to have known?

Ans. Yes.

Int. 42. Did you see anything putting up in that shop, except lobsters?

Ans. I never did, to my recollection.

Int. 43. Do you remember at what time in the year you were in his shop?

Ans. I cannot. It might have been in the fall; it might have been in May or June.

Int. 44. Do you know at what time those parties left in that year?

Ans. I do not know.

Int. 45. Do you or not know that one of the parties in that shop was Mr. Evans?

Ans. I never saw Mr. Evans to know that it was Mr. Evans; but it was the common report that there was a man by that name doing business there.

Int. 46. For whom was he packing; and where were his goods sent?

Ans. I do not know.

262 Int. 47. What was the distance of his shop from yours?

Ans. I think about 200 feet, on the same wharf.

Int. 48. Who were packing in Portland at this time?

Ans. Nathan Winslow, and Ring, and ourselves, (Wm. & Wm. K. Lewis.)

Int. 49. Were Winslow and Ring packing corn?

Ans. Winslow was; don't know about Ring at that time.

Int. 50. When did you finally discontinue puncturing the second time?

Ans. When we got our cans so made as to be strong enough to go through the two hours and one-half bath without bursting. Before

that time we used to lose a good many. I should think it was in about 1857.

Int. 51. Is not preserved green corn now an article of large manufacture in the market; and is it not mostly put up by cutting from the cob raw and putting into the cans in this condition in its own juices, with no admixture?

Ans. It is. This is the general method now employed, as far as I know.

Int. 52. Do you remember of the man Evans being on the wharf packing lobsters more than one year?

Ans. Yes, sir; I think he was there two lobster seasons.

Int. 53. Between 1845 and 1850 was it not a fact that packers in Portland pretty generally knew, in one way or another, what each other was doing in a general way?

Ans. Mr. Nathan Winslow was the only packer that I can swear was in the business in Portland, and he often tried to find out what I was doing, and often asked me questions, to which I always returned an evasive answer.

Int. 54. After green corn in the milk is cut from the cob, is it liable to quickly sour or not?

Ans. It is.

263 Int. 55. Is it not then necessary that a very short time should elapse between cutting from the cob and putting into the bath?

Ans. It is.

Int. 56. Could all the operations, that is, cutting from the cob, packing in the cans, soldering and bathing, be successfully, profitably, and practically performed by one man?

Ans. It could not. One man might put up half dozen or a dozen cans.

Int. 57. Would it be practicable for one man to attempt to pack corn alone?

Ans. No; not unless for his own use at home.

Int. 58. Between 1851 and 1860 or '63, was there not among corn-packers a pretty universal change of method in packing?

Ans. As far as I know, there was.

Direct resumed by R. K. Sewall, esq.:

Int. 1. In reference to puncturing the cans twice, state whether or not it was done where you had reason to fear the cans were weak; i. e., where they were not strong enough to bear the pressure.

Ans. Yes.

Int. 2. In relation to the use of salt, water, pepper, &c., in the goods inquired of by plaintiffs on cross-examination, state whether these condiments were at all relied on to preserve the goods, or whether it was the process of sealing described by you in your direct examination.

(Objected to as improper in form and irrelevant.)

Ans. It was the process of sealing that was wholly relied on.

Int. 3. State whether or not it was the process of sealing de-
264 scribed, or the water, salt, pepper, &c., on which you rely to preserve hermetically-sealed goods?

(Objected to as improper and irrelevant.)

Ans. I did not rely on the salt, water, pepper, &c., but on the sealing process; and they cannot be preserved without puncturing, as far as I know; although I have seen goods packed in cans in France and no puncture or hole could be discovered in the can-heads, for instance.

Int. 4. In your answer to the 15th cross-interrogatory you stated that

in 1855 you heard of Isaac Winslow as the originator of the so-called Winslow process; please state just what and all you heard about it.

Ans. I heard that Nathan Winslow had a brother in Paris, from whom he got information and the process, and wanted him, Nathan, to put up green corn, and sent him the receipt for putting it up.

(Objected to as hearsay.)

By Mr. Bradbury:

Int. 5. In packing green corn, as stated in your cross-examination, did you in all cases put water into the canisters? For what purpose did you put any water into the canisters in packing the corn?

Ans. I did not; it was added to make weight, to make the canisters sink in the bath.

Int. 6. Was or not the process complete without it?

Ans. It was.

Int. 7. Where and in what quantities did you put your corn into the market, and how was it labeled?

Ans. When we first commenced the business, commencing at 50 dozen per year, and rising to 4,000 or 5,000 dozens. Lewis & Haskell was on the cans at first, then William & William K. Lewis, then William K. Lewis & Bros.

Int. 8. Are you well acquainted with the article known in the market as the Winslow corn?

Ans. Yes, I am; have bought and sold it.

265 Int. 9. How did that corn compare in quality with that put by yourself?

Ans. We had no trouble in selling alongside of Winslow's. It looked as well—tasted as well as his. No fault was found with it—not near as much as was found with that we sold, having bought from Winslow.

Int. 10. When did you first know that a patent had been obtained for packing green corn?

Ans. About 1861 or '62 I took pains to examine, and found no patent mark on the cans, and then sent to Washington, desiring to know what his claim was, and procured a copy of the patent; and found that the patent was for a process, so far as probing was concerned, which I had used ever since I had been in business.

(Latter part of answer objected to, because witness cannot construe the patent.)

Int. 11. Are you acquainted with Samuel Rumery?

Ans. Yes.

Int. 12. Was he at any time a partner of yours; and if so, when?

Ans. Yes; 1845 to 1846.

Int. 13. After termination of your partnership, was he in your employment?

Ans. Yes; for one year.

Int. 14. When he left you, with whom did he become connected in business, or into whose employment did he go?

Ans. He next worked for Nathan Winslow.

Int. 15. Prior to this time, had Nathan Winslow used the process of probing?

(Objected to as immaterial.)

Ans. Think he never used the probing till then. His corn was what we call the swell-head. After that time, he did not have so much of his corn come back to him.

266 Cross resumed:

Int. 1. When did you first reach the amount of 4,000 to 5,000 dozen cans of corn a year?

Ans. In 1855 or 1856.

Int. 2. Do you know, from your own knowledge or observation, that Nathan Winslow did not practice puncturing till after Samuel Rumery went to work for him?

Ans. I do not positively know, but I have every reason to believe so; and after he went there, I observed that his cans were not swelled.

Int. 3. Can you swear that you saw all the corn that Nathan Winslow packed?

Ans. No, sir.

Int. 4. Then does not your knowledge extend any further than certain cans of Mr. Nathan Winslow's corn, which you saw?

Ans. It does not.

Direct resumed:

Int. 1. During the time you were packing corn and Nathan Winslow was packing corn in Portland, did you examine more or less of his corn every year, and see it in the market?

(Objected to as immaterial.)

Ans. Yes; I could not help seeing it.

Int. 2. Did you observe a difference between cans put up before, and those put up after, Samuel Rumery went to work for him?

(Same objection as above.)

Ans. The outward appearance of them was altogether different.

Int. 3. What was the difference you observed in the outward appearance of the cans?

Ans. Before Mr. Rumery went there the heads of the canisters were bulged out, and they were called swell-head cans. After he went to Winslow's the heads were level, or flat or concave.

GEORGE F. LEWIS.

267 *Deposition of George Burnham, jr., for respondent, taken Dec.* 28, 1871.

Int. 1. State your name, residence, and occupation.

Ans. My name is George Burnham, jr.; my age is forty years; my occupation is a packer of hermetically-sealed goods.

Int. 2. When did you first commence the business of putting up hermetically-sealed goods; with whom, and in what capacity?

Ans. In 1845, with George F. Lewis & Co., at Portland, as a workman.

Int. 3. State what you did with him, and what your knowledge of the art of putting up hermetically-sealed goods was at that time.

Ans. George F. Lewis & Co. put up at that time meats, fish, clams, poultry, lobsters. I assisted in preparing the goods for canning.

Int. 4. Were you acquainted with the process used by Lewis & Co. in the fall of 1845, in putting up and preserving the articles above named? And, if yea, will you describe it?

Ans. They took the articles above named, fish, meats, poultry, and clams, (with the exception of what was called "roast meats" and clams,) in their raw state and placed them in tin cans of one and two pounds capacity; these cans were then hermetically sealed, and contained only the raw material and their juices. After being sealed air-tight, they were placed in a hot bath of boiling water and allowed to remain about two hours and a half; they were then taken from the hot bath and punctured or vented by a small hole punched in the top, and the steam and gases allowed to escape. As soon as possible, the can was re-

sealed air-tight and returned to the bath, where they were allowed
268 to remain about three hours, dependent upon the size of the can; they were then removed and sent to market.

Int. 5. When, if ever, did Lewis & Co. pack green corn for the market to your knowledge, and what process did they employ?

Ans. The first green corn packed by Lewis & Co. was in 1846, so far as I know. The process of preserving was the same as described in the answer to int. 4, except that they boiled the corn on the cob somewhat, and then removed it and packed the kernels in tin cans, heating them in substantially the same manner as above described.

Int. 6. Did they puncture or vent the cans, and after the escape of the steam and gas reseal them as you have described in the process of preserving meats, poultry, and fish?

Ans. They did.

Int. 7. How long did you remain with Lewis & Co.; and with whom did you next engage in business, and what did you do?

Ans. I worked for Lewis & Co., at different times until 1851. In the spring of that year I commenced work for Samuel Rumery, as a book-keeper, and working in the factory. He was preserving meats, fish, and vegetables in Portland. In 1852 I went into partnership with Rumery, and remained until 1867, when we dissolved; during all that time we were engaged in preserving canned goods, meats, fish, and vegetables.

Int. 8. State whether you are acquainted with the process of puncturing and resealing, as used under the Winslow patent; and state when you first knew of said process.

Ans. I am; I knew of it in the fall of 1845; the process of puncturing and resealing, as practiced by Lewis & Co., was precisely the
269 same as that afterwards adopted by Nathan Winslow; and that practiced and known as the Winslow process, described in the patents of Isaac Winslow.

Int. 9. State whether or not you knew of Nathan Winslow's putting up green corn and lobsters in hermetically-sealed cans.

Ans. I did.

Int. 10. When did you first become acquainted with the process in putting up green corn in hermetically-sealed cans?

Ans. In 1847 or 1848.

Int. 11. In what respect did the process used by Winslow in putting up green corn in hermetically-sealed cans differ from the process used by Lewis in putting up meats and vegetables at that time?

Ans. It did not differ in any respect, except that Winslow did not puncture his cans.

Int. 12. Do you know what Winslow did with the corn put up by him in the years 1847 and 1848?

Ans. I do. It was sent by him to market.

Int. 13. State whether or not, in 1851 or 1852, any person assisted Nathan Winslow in putting up green corn; and if so, who?

Ans. They did. Samuel Rumery and William H. Beaumont.

Int. 14. State whether or not, at that time, Winslow punctured his cans; and if you gave him any advice about the matter, state what it was.

Ans. Rumery advised him to puncture the cans, and he did so to some extent.

Int. 15. Did he claim the corn was better without puncturing?

Ans. He claimed the corn was better without puncturing.

Int. 16. State whether or not you and Rumery put up green corn in

1854 for the market; and if yea, please describe particularly the process by which you put it up.

270 Ans. We did put up green corn in 1854. Our process was as follows: We packed the corn in one and two pound tin cans. The corn was brought to the factory unhusked, and there husked and cut from the cob in its green or milky state, with a knife, and the chit of the kernel scraped from the cob. The corn and its juice was then put into the can uncooked, and sealed air-tight. The can was then placed in a bath of boiling water, and allowed to remain one hour. It was then taken out, and while heated it was punctured, the air and vapor allowed to escape, then re-sealed, and re-placed in the bath, and allowed to remain there one hour and a half. It was again taken out and punctured the second time, re-sealed, re-placed in the bath, and allowed to remain three hours. If we only punctured it once, we allowed it to remain two hours and a half before puncturing, and three hours after puncturing. We thought by puncturing the cans twice, we got a better vacuum, and that there would be less liability of its bursting than when we punctured once. We labeled the corn and put it in the market. We put up, on an average, twenty thousand cans a year.

Int. 17. Please state in what respect your process differed from Nathan Winslow's and as described in the Isaac Winslow patents.

Ans. Our process is identical with his, except that he did not puncture but once. We sometimes added a little water, but this depended upon the state of the corn.

Int. 18. State how long you practiced the process described by you as used in 1854, in putting up green corn.

Ans. We practiced that process, with the exception of two years, until about 1862; we moved to Saccarappa, and then we only punctured the cans once.

Int. 19. State whether or not you varied the length of time of bathing; and if so, why you so varied it.

271 Ans. We did, owing to the state of the corn, whether it had been picked a long time; if so, then we gave it more bath.

Int. 20. State whether or not, to your knowledge, from 1847 to 1852, Nathan Winslow put up and sent to market corn in the manner described by you, with the exception of puncturing; and if you state that he punctured any of the cans containing the corn put up by him, state from what time he so punctured it.

Ans. He was putting up every year from 1847 to 1852. I do not know of his puncturing a can until 1852. He did not to my knowledge.

Int. 21. Are you acquainted with the process of putting up green corn under the so-called Winslow patents?

Ans. I am.

Int. 22. State whether or not, in that process, ice is added to the corn, and for what purpose.

Ans. Jones uses it for keeping the corn cool. He is the only one that uses it.

Int. 23. Have you at any time heard Samuel Rumery say that one Mitchell was the first man that he knew who put up green corn by the process described in the Winslow patents?

Ans. I have.

Int. 24. State whether or not you knew of the suit commenced by J. Winslow Jones vs. Benjamin Thompson et als., of New York, for an alleged infringement of the Winslow patent.

Ans. I did.

Int. 25. State whether or not Samuel Rumery, one of the complain-

ants in this bill, went to New York for the purpose of giving his deposition in that case, to your knowledge.

Ans. He did.

272 Int. 26. Whether or not you had any conversation with Rumery in relation to that suit, and the validity of the patents issued to Isaac Winslow in 1862.

Ans. I did have a conversation with Rumery, and he expressed the opinion that the patent was not worth anything.

Int. 27. How long have you known corn preserved by the process described in the Winslow patent to have been in the market as an article of commerce?

Ans. Since 1847.

Cross interrogatories propounded by William H. Clifford, counsel for complainant.

Int. 1. Were you acquainted with Isaac Winslow?

Ans. I was not.

Int. 2. When did your acquaintance begin with Nathan Winslow?

Ans. I knew him by sight as early as 1846. I was not acquainted with him until 1847 or 1848, when he and Rumery went in together.

Int. 3. Did you ever know of Isaac Winslow preserving green corn? Did you see the process of preserving the article?

Ans. I never did.

Int. 4. Did you ever know of Isaac Winslow's having given his consent to any one to preserve green corn according to the Winslow process for him?

Ans. I have not.

Int. 5. When did you first become acquainted, and where, with the process employed by Nathan Winslow in his factory?

Ans. In 1851 I went to his factory, and saw him put it up; that was in Westbrook.

Int. 6. Did you not first learn the details of the so-called Winslow process from your former partner, Rumery?

Ans. I think the details of the process I heard Rumery speak of as early as 1848.

273 Int. 7. When you preserved meats in cans how did you prepare the juices in which the meats were preserved?

Ans. We packed the meats raw, without any gravies, with the exception of the roast beef; we roasted and used to make a little gravy for that; but afterwards we gave that up, because the boiled meat was better than the roast.

Int. 8. What meats did you put into the cans raw without any prepared gravies?

Ans. Beef and mutton.

Int. 9. How early did you first put beef and mutton into tin cans raw, seal up the cans, bath, and vent the same after bathing?

Ans. I worked for Lewis, and did that as early as the fall of 1845.

Int. 10. Was there not a small portion of salt sprinkled over the top of the can?

Ans. There was some put in the bottom of the can.

Int. 11. Was it not generally customary among packers to apply the salt at the top of the cans down to 1860?

Ans. I never knew it to be done; always put it in the bottom.

Int. 12. When did you yourself first begin the process of placing the kernels of green corn raw into the cans with the milk of the kernels

and no foreign admixture, sealing the cans, bathing, and puncturing, according to the so-called Winslow process?

Ans. 1854 and 1855, except sometimes we added water. I never practiced it till that time.

Int. 13. Did not your former partner, Rumery, always profess to you that he had learned the so-called Winslow process from Isaac Winslow?

Ans. He always professed to me that he learned in from Nathan Winslow.

274 Int. 14. Do you know, by actual observation at the time, about the process that was used by Nathan Winslow in his factory at any time earlier than the date of 1851 or 1852, of which you have spoken?

Ans. Not by my own personal observation.

Int. 15. Do you know of any corn which was preserved by the so-called Winslow process by Isaac Winslow ever being sold in the market or offered for sale prior to 1852?

Ans. I never knew of any corn packed by Isaac Winslow, nor never knew of any being offered for sale by him.

Int. 16. Did you ever know of any corn preserved by this process sold, or offered for sale, with the knowledge or consent of Isaac Winslow, prior to 1852?

Ans. I did not.

Int. 17. Is it not a fact that the preserved article of green corn, resulting from the so-called Winslow process, is a better article than that produced by other processes previously used by you?

Ans. I do not think it is.

Int. 18. In your answer to the 12th direct interrogatory to which Mr. Winslow do you refer?

Ans. Nathan Winslow.

Int. 19. Do you know of any persons to whom the corn put up by Nathan Winslow in 1847 and 1848 was sold?

Ans. I do.

Int. 20. Do you know what quantity of green corn was put up by Nathan Winslow in 1847 and 1848?

Ans. I do not know.

Int. 21. Is not your knowledge of the corn referred to by you in the answer to the 12th direct interrogatory, specified as disposed of by Nathan Winslow, limited to a few cans of corn?

Ans. It was quite a little quantity at that time; it would be considered a small quantity now.

275 Int. 22. How many cans have you actual personal knowledge thus disposed of by Nathan Winslow in these two years?

Ans. I have known of a number of lots.

Int. 23. Have you not pursued the so-called Winslow process in the preservation of green corn since 1854 or '55?

Ans. Nearly all the time except two years.

Int. 24. Did you ever hear of the so-called Winslow process, except from the source which you have mentioned before in this deposition?

Ans. Only through Rumery.

Int. 25. In 1852 what other persons were engaged in preserving green corn in Portland beside yourself?

Ans. George F. Lewis and W. H. Davis; those are all that I know of.

Int. 26. Do you know the process that was followed by Davis and Lewis at that time?

Ans. Davis and Lewis both cooked the corn before putting it into the can before 1852; they did not commence putting it into the cans raw until after we did.

Int. 27. Was not Isaac Winslow in '51 and '52 generally regarded and spoken of as the inventor of the Winslow process at that time?

Ans. I understood he had applied for a patent at that time. I don't think he was known before that time; that is the first I ever heard of Isaac Winslow.

Int. 28. You do not know the process used by Nathan Winslow prior to 1851 of your own knowledge?

Ans. I do not.

Int. 29. What vegetables did you and Rumery practice the preservation of when you first went into partnership?

Ans. Peas and beans.

Int. 30. What preparation of liquor was usually placed, for instance, in a one-pound can of peas and beans, when preserved?

276 Ans. We used to fill the cans and make up the weight in water; perhaps we put in two and a half to three ounces of water to the peas and the same to the beans; the water was salted.

Int. 31. Was or not this rule generally applied to other vegetables except corn?

Ans. It was, with the exception of squash, which did not need any.

Int. 32. What proportion of gravy or liquor was used with fish in a one-pound can?

Ans. None.

Int. 33. Is it not a fact that there is no article except corn preserved by you, or to your knowledge, by packers generally, of which the pure juices of the article form the only liquor in which it was preserved?

Ans. In my own knowledge corn was the only thing, as we always put salt with our meat and fish; I understand that is the general custom of packers.

Int. 34. Did you or not visit Boston in the spring of 1870 and call upon Charles J. Underwood and other persons in connection with this suit?

Ans. I did.

Int. 35. Was or not an arrangement or understanding made by which several parties not parties to the suit were to contribute to the expenses of the defense?

Ans. I had a paper drawn up for parties in the business to sign, to bear an equal proportion of the expense. They were not parties to the suit.

Int. 36. How many parties' names were on that paper?

Ans. I cannot answer correctly; there may have been over eight and it may be over twelve.

Int. 37. Were or not those parties persons engaged in the preservation of articles of food?

Ans. They were.

277 Int. 38. Have or not some or all of those parties contributed to the expenses of the suit?

Ans. They have not; they have not yet paid up.

Int. 39. Are you not at the present time preserving green corn by the so-called Winslow process in your business?

Ans. I am.

GEORGE BURNHAM, JR.

Deposition of George Burnham, jr., for respondent, taken Dec. 4, 1871.

I, GEORGE BURNHAM, of Portland, in the county of Cumberland, and State of Maine, on oath depose and say:

In the last of August, at Paris, Maine, I took some corn; first cut it from the cob in the raw state; the corn was green, in the milk, in a proper state to be preserved; then packed it in the cans, placed it in a bath of boiling water, with the vent-hole open. The can was all sealed except the vent-hole. The can was not wholly immersed; it was all under water but the top; boiled thirty minutes; then I removed the can from the water and hermetically sealed it; then returned it to boiling water, and boiled it three hours. Nothing was added to the corn in the cans. Two of these cans I brought to Portland. One of them was sent to Charles Underwood, of Boston, to have it analyzed. I delivered it to Wm. H. Swett, of Swett's Express, to be delivered to Charles Underwood. This can was selected from a lot which I put up for my own use and my friends. It was, in my opinion, the best corn I put up.

278 Cross-examined by Mr. Clifford:

By the puncture. I mean the pin-hole made by the puncturing-awl. The cans were held still in the water. I stood by the cans all the time, and nothing escaped but steam, or air, and gases. I could not tell the temperature of the contents of the can when I took it out. This process shortens the bathing. I consider the effect upon the corn substantially the same as that in what is termed the Winslow process. It was what is called sweet corn. The kernels were cut open in removing from the cob. The juices were saved and the corn was packed in its own juices. I never have had any name for this process of packing corn. I do not know as I could learn this process from reading the Durand patent, but I find that it is very similar. I did not get this from the Durand patent. I have packed some this way, more or less, since 1864, sure; I think perhaps earlier. I think we tried this the first year Samuel Rumery and I began the Winslow process of packing, I think 1863. I am certain we did not know of it till that time. The corn was a few hours from the field.

I never read the Wertheimer patents.

In the way I packed the corn, the effect of the heat upon the juices of the corn would be to coagulate them. I have heard that the early packers used to pack corn by putting it into the can upon the cob. I was requested by Mr. Sewall to have some prepared in this way for the purposes of analysis. You would have to get the corn up to nearly the boiling point, in order to obtain the escape of the steam and gas; and that would take about the half hour of which I have spoken. The puncture is then stopped to prevent the escape of the aroma and elements of the corn, which begins to take place about that time. These cans were pound and a half cans. In this way we get along with

279 a shorter bathing than we do with the cans sealed up; and I think that the corn is better, because it is lighter in color, owing, as I suppose, to the escape of certain gases, the names of which I do not know, and better retaining the corn flavor; and it is owing to the escape of these gases which are allowed to escape, but which, when the can is bathed, being sealed, are retained; but I consider this the equivalent of the Winslow process.

When we place the can into the boiler in this way, the contents would not reach the boiling-point or the same temperature of the water around

the can, in much less than the half hour I have mentioned. With this method, being obliged to watch the punctures, you cannot work as fast, with the same amount of labor, as with the Winslow process, that is, when the cans are put in sealed, because you cannot submerge the cans. If the stud was left open the flavor would not escape, but the boiling water of the boiler would be likely to slop in; but of course the larger the aperture the more flavor you would lose. I consider that, with this half hour's treatment, and the very minute puncture, I lose none, or a very minute portion of the flavor; but there are certain gases, I think, which pass away in this process, which in the other are retained for a time, and which injure the flavor of the corn. I mean those gases, which, left permanently in the corn, produce fermentation.

I am aware that the oil in corn which produces the flavor is very easily lost in treatment. The puncture which I make when I begin to bath the cans, is the only ones I make in this process. This can which I sent was not labeled at all. The only difference between this and the other method is that the gas is allowed to escape as released, instead of being kept in the can for a time. A bath of half an hour in this way is equivalent to an hour by the other, so far as getting the vacuum is concerned. The bulk of my corn this year is put up by what is called the Winslow process, the same as always.

280 Direct resumed:

The water is boiling when the cans are put in, and kept boiling during the immersion. I am the Geo. Burnham, jr., who has given a former deposition in this case.

GEO. BURNHAM, JR.

Deposition of William H. Swett for respondent.—Taken Dec. 1874.

Name, William H. Swett, of Portland; business, expressman.

George Burnham, jr., gave me a tin can sealed up, Oct. 16, 1871, to be sent to Boston. It was delivered there to Charles J. Underwood, in person, on the seventeenth of the same month.

W. H. SWETT.

Deposition of Stephen P. Sharples for respondent.—Taken Dec. 8, 1871.

Int. 1. State your name, age, residence, and occupation.

Ans. My name is Stephen P. Sharples; age twenty-nine years; reside in Cambridge, Mass. I am an analytical chemist.

Int. 2. How long have you been engaged; what actual experience have you had, and in what departments of chemistry?

281 Ans. I graduated at the Lawrence Scientific School at Cambridge, Mass., in the department of chemistry, in July, 1866. I was then for six months private assistant to Dr. Wolcott Gibbs, Rumford Professor in Harvard University, and was engaged on original researches, partly in organic and partly in inorganic chemistry. After that, from July, 1867, to July, 1868, I was employed as instructor in chemistry in the Lehigh University, at Bethlehem, Pennsylvania. From the summer of 1868 to the summer of 1871, I was employed as assistant to the Rumford Professor in the Lawrence Scientific School, during most of which time I was also at work on original researches. Since then I have been employed by J. R. Nichols & Co., 150 Congress street, Boston, Mass., as analytical and consulting chemist. I have also been employed as expert in the case of the United Nickle Company vs. Frederick Anthes. I am the author of "Chemical Tables," and of several

contributions to chemistry that have been published in the American Journal of Science and Arts.

Int. 3. State whether or not you have made analysis of green corn in its natural state, and of corn preserved green in cans; and if yea, describe particularly the specimens, how you obtained them, and where, and whether you have in your possession the original vessels or cans; and if yea, produce them, and say whether or not the external marks thereof are the same as when you received them.

(Objected to, because it does not appear under what process the canned corn was preserved.)

Ans. I have made analyses of green corn, both in its natural state, and preserved in cans. The green corn in its natural state was obtained by me in October last at Faneuil Hall Market. I analyzed the contents of two cans; one of these was marked "Winslow's Green Corn, hermetically sealed, warranted to retain all its original flavor for
282 years in any climate. Prepared by John Winslow Jones, successor to Nathan Winslow & Co., Portland, Maine." (Witness produces the can referred to, and it is marked "Exhibit A, C. W. T., Ex'r." Counsel for defendants here offer in evidence Exhibit A.) This can, marked "Exhibit A," I got myself from John Gilbert, jr., & Co., No. 2 Tremont Row, Boston, who said they were agents for Winslow's green corn, and it has since been in my possession. It now has the same external marks, except the magistrate's, that it had when I obtained it.

The second can that I examined was placed in my hands by Mr. William J. Underwood, at his place of business in Broad street, Boston, and was marked by him, "Corn packed under the Durand process," and also bore a black mark on its side, near midway between the ends, and parallel with the ends. There is also, on this can, another mark on the soldering, in the form of a cross, apparently made by a file. This can has been continuously in my possession until this time, and the same external marks, with the exception of the magistrate's are now on it as when I first had it. (The witness produces the can referred to and it is marked "Exhibit B, C. W. T., Ex'r.") Counsel for defendant here offers in evidence Exhibit B.

Int. 4. Please state particularly the results of said analysis of the several parcels described, and also wherein each differed from the other, if at all.

Ans. The result of my analysis of green corn in a natural state, and of canned corn in Exhibits A and B, are as exhibited in the following table:

	Green corn.	Exhibit A.	Exhibit B.
Water	72.98	65.31	63.88
Fat or oil	1.60	2.06	1.88
Fibre	.72	1.13	.59
Sugar and gum	7.51	11.03	15.54
283 Starch	13.56	16.26	13.88
Nitrogenized substances	2.73	3.59	3.57
Ash or mineral matter	.90	.62	.72
	100.00	100.00	100.00

They differ from each other mainly in the amounts of water they contain, and the relative proportions of sugar and gum and starch. This

specimen of green corn was gathered late in the fall, and is deficient in solid matters and in sugar. The total amount of sugar and gum and starch is almost exactly the same in the two specimens of canned corn, and as the starch and sugar are considered as equivalent, as articles of food, their value would be about the same, but the specimen, Exhibit B, would be more palatable, as it contains a larger amount of sugar.

Int. 5. What, in your opinion, is the comparative value, as an article of food, of the two kinds of preserved corn indicated by Exhibits A and B, and the reasons thereof?

(Objected to as incompetent. Question waived.)

Int. 6. State whether or not there was any difference in the color and flavor of the contents of Exhibits A and B; and, if any, what they were.

Ans. Their color was about the same, but Exhibit B was of much better flavor than Exhibit A; it tasted as if just cooked, while A was slightly insipid, tasting as if it had been cooked and then allowed to stand a day exposed to the air.

Int. 7. What is the chemical effect of confined air on the essential oils, juices, and flavor of green corn, when exposed to heat in air-tight vessels, and how is that effect produced?

Ans. The flavor of any vegetable is owing to certain essential oils. These oils tend to oxidize, more or less rapidly, when the vegetables are exposed to the air. By heating vegetables in contact with confined air this action would be accelerated, according to well-known chemi-
284 cal principles. By this oxidation the flavor is destroyed or deteriorated, and the vegetable becomes stale.

Int. 8. State whether or not the essential flavor or juices of green corn, when packed in cans with vented tops, and put into hot baths for a short time, is dissipated or driven off; and if not, why?

Ans. It would undoubtedly be, to some extent; how much would depend upon the length of time it was heated. Heating quickly would prevent, to some extent, this loss, by coagulating the juices of the corn.

Int. 9. What is the effect of rapid heat applied to the contents of canned corn, the cans being vented during the application, in the preservation and upon the qualities thereof?

Ans. The first effect would be to expand the air in the can and partially drive it out. Some of the water of the juices of the corn would next be converted into steam. This would drive out the remaining portion of the air. The result of this expulsion of the air would be that the can could be heated much longer without injuring the flavor of the corn, there being no air present. Oxidation would not take place, and the loss of flavor would be only owing to the small portion that escaped with the steam.

Int. 10. Have you examined the analysis made by S. Dana Hayes, in the case of J. Winslow Jones et als. versus Henry Clark? and if yea, state whether or not said analysis is generally and substantially described and given in chemical books, and if yea, state what books, giving the name of the book, volume, page, etc.; and also state what kind of corn is covered by said analysis.

Ans. I have examined said analysis; it does not appear to be an analysis of green corn, as it closely resembles those given in various chemical works of ripe corn. This differs chiefly from green corn in
285 the amount of water it contains. Ripe corn contains, according to various authorities, from ten to fifteen per cent. of water, while green vegetables contain from sixty to ninety-five per cent. of water; my

own determination giving it as about seventy-three per cent. For analysis of ripe corn I would quote the analysis given by Prof. S. M. Johnson, in the book called "How Crops Grow," English edition, page 385, the last four lines. I could also quote a dictionary of chemistry, by Henry Watts, vol. i, page 825, under the article Maize. I will also quote the report of the Department of Agriculture for 1865, page 425, for analysis of Indian corn.

Cross-examination by William H. Clifford, esq.:

Int. 1. Do you know how long the corn you purchased at Faneuil Hall Market had been picked?

Ans. I do not; but judging from the husks, the general appearance of the corn, and taste, I should not think it had been picked more than a day; it was in good order for eating.

Int. 2. Is it not a fact that corn strictly green would be wholly unfit for use of food? Is not what we call green corn, corn in an early stage of maturity simply?

Ans. As I understand the term green corn, it is corn that has filled; but the hardening process has gone but a short distance, and the corn has not become what is called old corn and unfit to boil. I should think what we call green corn was corn in a very early stage of maturity.

Int. 3. Is not corn not hardened affected as to the amount of moisture or water it holds, by the age of it or its stage of development or maturity?

Ans. It undoubtedly is. The process of maturing consists partially in the elimination of water, together with the change of the sugar and dextrine, or gum, into starch. The relative proportions of the remaining solid parts of the corn apparently undergoes but little change.

286 Int. 4. Is it not a well-known fact that certain kinds of green corn contains more water than others of the same stage of maturity?

Ans. I do not think it is. I have been unable to find any comparative analyses of green corn in the books.

Int. 5. Do not the published analysis of different kinds of corn show such to be the fact?

Ans. The published analysis of corn are all of ripe corn, and these do not differ among themselves in regard to the amount of water, more than a few parts in a hundred, and no more than the analysis of other grains differ in the same constituent.

Int. 6. Have you ever preserved any green corn yourself by any process?

Ans. I have not.

Int. 7. Have you ever made any analysis of green corn before the one upon which you have testified?

Ans. I have not.

Int. 8. What practical experience have you had in agricultural chemistry; have you had any? State fully.

Ans. I have had some experience; I have had considerable experience in organic chemistry, to which this investigation properly belongs. I have worked on original researches for Dr. Gibbs, and am thoroughly well acquainted with the process employed, and am now engaged on an investigation of certain products of the wheat-berry.

Int. 9. How long since was it that you first commenced your experience in agricultural chemistry?

Ans. I have made a study of agricultural chemistry ever since I commenced the study of chemistry, my first intention being to devote myself to that branch. I first commenced to make organic analyses in 1866.

Int. 10. What were those analyses of 1866? Of what?

287 Ans. They were determinations of nitrogen, carbon, and hydrogen in various substances; and in that same year I was engaged in investigation on the composition of certain vegetable oils and fat.

Int. 11. What were those substances upon which you were engaged in 1866, and in what were the fats upon whose composition you were engaged?

Ans. I made, among other things, analyses of asparagus, and the oils were palm oils, and the separation of its various constituents.

Int. 12. When was the first time you ever undertook the analyses of the constituents of any vegetable?

Ans. We distinguish two kinds of analyses, proximate and ultimate. I first made ultimate analyses as given above. I have made proximate analyses, for the separation of one single constituent of vegetable organic bodies, at various times. My first full investigation of the constituents of an organic body was made this last summer. It is not the one upon which I am now testifying.

Int. 13. You are, of course, acquainted with the common yellow corn, commonly given as fodder to animals, and is not its flavor due to the oil, as in other corn?

Ans. I am acquainted with such corn. Its flavor is undoubtedly due to the oil. The amount of this oil is very variable in different specimens of corn.

Int. 14. Is it not your opinion that the difference in the amount of sugar and gum between the analyses of Exhibits A and B, is due to the variety of corn or stage of maturity?

Ans. The specimens of corn all purport to be of the same variety. The difference in sugar and gum, I should think, was owing to the stage of maturity of the corn. As the corn matures the sugar is changed into starch, and the relative amount of starch becomes larger. That fact in Exhibit B, I should judge, from the analysis and from the general appearance of the corn, to have been a younger specimen; that

288 is, less mature, and in better condition for packing. All the difference of fibre in the specimens examined may have resulted from the closer scraping of the cob, so that more cob-fibre got in one than in the other. I consider the product of Exhibit A and Exhibit B substantially the same, with the exception that the flavor of B was better preserved.

Direct examination resumed:

Int. 1. Why do you use the word organic chemistry in your answers instead of agricultural chemistry, as applicable to the analyses of vegetable substances?

Ans. Because, as I understand the term, agricultural chemistry is more applicable to the relation of the plant and soil to each other, and to the transformations that take place in the living plant. With this the analytical chemist has but little to do.

Int. 2. State whether or not the green corn you bought at Faneuil Hall Market, referred to in answer to int. 3, was or was not sweet corn.

Ans. It apparently was sweet corn, and was sold as sweet corn by the vender.

S. P. SHARPLES.

MEMORANDUM.—It is agreed by the parties to this suit that the can marked "Exhibit B," and analyzed by this expert, is the same as that referred to by George Burnham, jr., in his second doposition in this case.

DEFENDANT'S EXHIBIT A.

A tin can, on which is printed "Winslow's Green Corn, hermetically sealed. Warranted to retain all its original flavor for years in any climate. Prepared by John Winslow Jones, successor to Nathan
289 Winslow & Co., Portland, Maine. Also, meats, fish, and vegetables. Owing to the immense demand for hermetically-sealed goods large amounts of worthless articles are offered for sale, which render it very important for purchasers to look well to the brands they purchase." In writing is the following: "D. J. W. Jones et als. *vs.* Henry Clark, R. K. Sewall, Admr. Defendant's Exhibit A, C. W. T., Exr."

DEFENDANT'S EXHIBIT B.

A tin can, marked "Exhibit B. C. W. T., Exr."

DEFENDANT'S EXHIBIT C.

Extract from Turner's Chemistry, 5th Am. from 5th Lon. ed., Philadelphia, 1835, sec. 7, pp. 635–6.

"It is probable that when moisture and warmth concur, putrefaction in animal matter which has not been heated to 212° will take place independently of atmospheric influence. But when animal matter has been boiled, and is then, without subsequent exposure, completely protected from air, it may be preserved for years, even though moist and in a temperature favorable to putrefaction. The practice of preserving every kind of food, both animal and vegetable, now a subject of extensive commercial enterprise, affords ample demonstration of this statement. The mode generally adopted is the following: Into a tin vessel is placed any kind of food, such as joints of meat, fish, game, and vegetables, dressed for the table, and into the interstices is poured a rich gravy, care being taken to have the vessel completely full. A tin cover, with a small aperture, is then carefully fixed by solder, and while the whole vessel is perfectly full, and at the temperature of 212°, the remaining aperture is closed. As the ingredients within cool and contract, a vacuum is formed if the operation has been skillfully
290 conducted, and the sides of the vessel are in consequence slightly pressed in by the weight of the atmosphere."

DEFENDANT'S EXHIBIT D.

Extract from Liebig's Complete Works on Chemistry, Philadelphia, 1841, chap. 7, p. 101.

"The beautiful experiments of Gay Lussac upon the fermentation of the juice of grapes, as well as the important practical improvements to which they have led, are the best proofs that the atmosphere possesses an influence upon the changes of organic substances. The juice of grapes, which were expressed under a receiver filled with mercury, so that air was completely excluded, did not ferment. But when the smallest portion of air was introduced, a certain quantity of oxygen became absorbed and fermentation immediately began. Although the juice was expressed from the grapes in contact with air under the conditions therefore necessary to cause its fermentation, still this change did not ensue when the juice was heated in close vessels to the tem-

perature of boiling water. When thus treated, it could be preserved for years without losing its property of fermenting. A fresh exposure to the air at any period caused it to ferment.

"Animal food of every kind, and even the most delicate vegetables, may be preserved unchanged if heated to the temperature of boiling water in vessels from which the air is completely excluded. Food thus prepared has been kept for fifteen years, and upon opening the vessels after this long time has been found as fresh and well-flavored as when originally placed in them.

"The action of the oxygen in these processes of decomposition is very simple; it excites changes in the composition of the azotised mat-
291 ters dissolved in the juices; the mode of combination of the elements of those matters undergoes a disturbance and change in consequence of their contact with oxygen. The oxygen acts here in a similar manner to the friction or motion which affects the mutual decomposition of the salts, the crystallization of the salts from their solution, or the explosion of fulminating mercury. It causes the state of rest to be converted into a state of motion."

DEFENDANT'S EXHIBIT E.

Extract from "The Young Housekeeper's Friend, by Mrs. Cornelius," Boston, 1859, pp. 179–180.

"CORN-SOUP.—Cut the corn off the cob, and boil the cobs half an hour in the water; then take them out, put in the corn, and boil it twenty minutes or half an hour. If there is a quart of the corn and water, add a pint of new milk, with salt, pepper, and one or two beaten eggs. Continue the boiling a few minutes, and thicken it a little with flour.

"SUCCOTASH.—Cut off the corn from the cobs, and an hour and a half before dinner put the cobs, with a few shelled beans, into cold water to boil. After one hour take out the cobs, put in the corn, and boil it half an hour. There should be no more water than will be necessary to make the succotash of the right thickness, as having too much occasions a loss of the richness imparted by the cobs. When you take it up add a small piece of butter. This is much better than to boil the corn on the cob and then cut it off."

292 COMPLAINANT'S REBUTTING TESTIMONY.

Deposition of Matthew F. Whittier, for complainant, taken January 25, 1872.

Circuit court of the United States, Maine district. In equity.

JOHN W. JONES, COMPLAINANT,
v.
HENRY CLARK, DEFENDANT.

UNITED STATES OF AMERICA,
District of Massachusetts:

Be it remembered that on the twenty-fifth day of January, in the year of our Lord one thousand eight hundred and seventy-two, at Boston, in said district of Massachusetts, before me, John G. Stetson, clerk of the circuit court of the United States in and for the district of Massachusetts, authorized and empowered to take and certify depositions, and duly appointed and qualified under the acts of Congress in such case

made and provided, personally appeared MATTHEW F. WHITTIER, of Boston, in said district of Massachusetts, a witness for the complainant in a certain cause in equity, depending in the circuit court of the United States within and for the first circuit and district of Maine, wherein John W. Jones is complainant and Henry Clark is defendant; and the said Matthew F. Whittier, being by me first carefully examined and cautioned and sworn to testify the whole truth relative to the issue, did depose and say, in answer to the interrogatories contained in Schedule A as appears in Schedule C, and in answer to cross-interrogatories contained in Schedule B as appears in Schedule D, which Schedules A, B, C, and D are hereto annexed, as follows:

293 SCHEDULE A.

Interrogatories propounded to Matthew F. Whittier by William Henry Clifford, counsel of complainants in the above cause:

1. State your name, age, residence, and occupation.

2. Were you acquainted with Isaac and Nathan Winslow from 1842 down to the time of Isaac Winslow's applying for a patent on his process of preserving green corn; and if yea, on what terms were you with them?

3. What, if any, business connection existed between them during this time?

4. Did you know of Isaac Winslow's packing corn; and if yea, were the brothers associated in this in any business relation; or had Nathan any authority or permission from Isaac to pack corn from 1842 to 1852?

(Objected to as leading. B. B.)

5. Did or not Isaac Winslow give any authority or agency to Nathan Winslow, or to any one, to preserve corn, or to dispose of corn preserved by his process, prior to 1852?

(Objected to as leading. B. B.)

6. Do you know where the corn which Isaac Winslow packed by his process was put, and why it was put there?

SCHEDULE B.

Cross-interrogatories propounded to Matthew F. Whittier by Bion Bradbury, counsel of defendant in the above cause:

1. Do you know whether Isaac Winslow or Nathan Winslow packed any green sweet corn between the years 1842 and 1852, inclusive? If so, when and where was it done?

(Objected to so far as relates to Nathan Winslow.)

2. Where did Isaac Winslow and Nathan Winslow reside from 1842 to 1852, inclusive?

294 3. Did either of them sell any packed green sweet corn between the years of 1842 and 1852, or send any to market? If so, when, where, to whom, and how much?

(Same objection as to interrogatory 1.)

4. If you should answer the 5th interrogatory in the negative, state how you know no such authority or agency was given.

5. If, in answer to the 4th cross-interrogatory, you say that Nathan Winslow did pack and sell green sweet corn between the years of 1842 and 1852, inclusive, state whether or not Isaac Winslow knew that Nathan was packing and selling said corn.

(Objected to as immaterial.)

6. Do you know how much corn Isaac Winslow packed between 1842

and 1852, inclusive, and what he did with it all? If so, state how much, and what he has done with it.

SCHEDULE C.

Answers of Matthew F. Whittier to interrogatories propounded by William Henry Clifford, esq., counsel for complainant, and contained in schedule herewith annexed, marked Schedule A:

Answer to interrogatory 1. He saith: Matthew F. Whittier; am fifty-seven years of age; reside in Boston; am a clerk in the custom-house.

Answer to interrogatory 2. He saith: I was Nathan Winslow's confidential clerk from 1842 to 1852. During a very small portion of the time I had other partial employment, though during the whole of that period I had the principal charge of his books, and was with him nearly every day. Was on intimate and confidential terms with both Nathan and Isaac Winslow, and knew about their business nearly twenty years.

295 Answer to interrogatory 3. He saith: I never knew of any business connection between them. They were brothers, but not associated in business.

Answer to interrogatory 4. He saith: I knew of Isaac's packing green corn at Westbrook. He had invented a process of preserving green corn, and was intending to apply for a patent on it, and it was, of course, desirable that the cans or vessels to contain the preserved corn should be strong and well made. I think the cans were for the most part made at his brother Nathan's store, (a stove-store,) or by one of Nathan's workmen. I think the cans were as well made as any one then knew how, but many of them burst. Nathan Winslow had no business connection with Isaac in this. Nathan was with Isaac, and I think some years put up some corn himself, under Isaac's direction. He knew nothing of the matter but what he obtained from Isaac.

Answer to interrogatory 5. He saith: He did not to my knowledge. I know he was strongly averse to sales or public disposal of his corn until after he had made application for a patent, which he always proposed to do; am sure he knew of his legal rights and liabilities as an inventor. Nathan Winslow was desirous to offer some of the corn for sale in the market, but am confident he obtained no permission from Isaac. More than once Isaac refused to have any corn sold. I think the corn he packed from year to year was stored in the attic of Nathan's store on Fore street, and later in the attic of Nathan's store on Union wharf, in Portland. It remained there many years.

Answer to interrogatory 6. He saith: I think to test the cans, which in these early times were imperfect in their make.

MATTHEW F. WHITTIER.

296 SCHEDULE D.

Answers of Matthew F. Whittier to interrogatories propounded by Bion Bradbury, esq., counsel for defendant, and contained in schedule herewith annexed, marked Schedule B:

Answer to cross-interrogatory 1. He saith: Isaac Winslow did. He was at Westbrook a number of years, in the corn season, engaged in putting up corn by his process. Nathan was there at times, and, I think, assisted occasionally; but I always understood that Isaac directed the process. Most of the corn was stored.

Answer to cross-interrogatory 2. He saith: Isaac at Philadelphia, and Nathan at Portland.

Answer to cross-interrogatory 3. He saith: I am very confident that none was sold or sent to market by Isaac. I do not know how much, when, or where was sold by Nathan.

Answer to cross-interrogatory 4. He saith: I know that Nathan Winslow never pretended to or claimed any agency prior to 1852, because he invariably spoke of the business as Isaac's, until he and John W. Jones took license and went into the business of packing, paying Isaac a royalty. I think I saw all Nathan's business papers between 1842 and 1852, and I am sure there was no written permission for Nathan to sell the packed corn from Isaac, and I have several times heard him refuse Nathan's request for permission to sell even very small quantities.

Answer to cross-interrogatory 5. He saith: I have every reason to suppose he did not know. I know that he was opposed to all sales until he had perfected his process. He was only a few days at West-
297 brook during the corn-packing season. I cannot tell how much Nathan may have sold privily, but I am sure there was no general business. There was not enough packed.

Answer to cross-interrogatory 6. He saith: I cannot remember, only I know the quantity was very small. Isaac considered himself an inventor, intending to get a patent, and that he was not engaged in the manufacture of what he invented; that was my impression at the time and is now. As I have already stated, that it—the corn—was mostly stored, first on Fore street and then on Union wharf, in Portland.

MATTHEW F. WHITTIER.

Deposition of Jeremiah R. Ford for complainant, taken June 30, 1871.

I, JEREMIAH R. FORD, of Searsport, in the district of Maine, being duly sworn, on oath depose and say as follows:

1. What is your name, age, residence, and occupation, and how long have you been in your present business?

Ans. Jeremiah R. Ford; fifty-four years; Searsport; farmer; fifteen years in farming business.

2. Were you ever engaged in the business of preserving hermetically-sealed goods; if so, where, when, and with whom, and who were at work with you?

Ans. I was; at Eastport, Maine; Charlestown and Boston, Mass.; Portland, Maine. I began the business in 1845, at Eastport, Maine, with Treat, Noble & Co. I staid there until the business was bought out by Underwood, and then went up to Boston with the concern, the same time that Charles Mitchell did; worked there and at Charles-
298 town till 1850, and then went down to Portland and stopped there till about 1855. At Eastport I knew and worked in the factory with Charles Mitchell, U. S. Treat, Samuel Rumery. At Boston I worked with Charles Mitchell; I was the second foreman. At Portland I worked the first two or three years with Lewis & Co.; then I worked five years with W. H. Davis & Co. After I left Davis I went down on my farm at Searsport, and have been there ever since.

3. What did you pack at Eastport?

Ans. Lobsters, fish of different kinds, clams, oysters, meats, and soups. In the fall of year, when corn came round, we put up a little corn, more for experiment than anything else.

4. What was packed at Boston and Charlestown?

Ans. About the same; might have had a little more variety—about

the same, and about the same at Portland; we handled more poultry at Portland.

5. How was the fish packed; how the meats; how the corn at Eastport?

Ans. We took the fish, dressed them, put them into cans; before soldering, put in a little salt. The roast meat we tied up in bundles and roasted, and then put into the cans. We put some meat into the cans raw, with salt and a little stock. The stock was made by boiling the bones of the meat and extracting the juice, then adding some spice, i. e., pepper, salt; then we filled this into the cans around the meat. We did not pack vegetables by themselves, only put them, cut up fine, into the soups. After husking we put the corn into boilers on the cob; then after boiling we took off the kernels and put them into cans, and then added a little water. We took off the kernels with a knife.

6. What was your duty or department of business at Eastport with Treat, Noble & Co.?

299 Ans. I had to see that all the articles were properly prepared for packing; then when packed to see the cans cleaned and painted. We painted the cans in those days.

7. Was there any corn put up at Eastport, up to the time you went up to Boston, by cutting off the cob in a raw state, filling into cans in that state, sealing, and then bathing?

Ans. No; none of us knew anything about such a way. I think we heard while at Eastport of a man up to Portland who was putting up corn a new way. The amount of corn we put up was very small; a few cans only. I had charge of the preparing of it all, and knew all about it.

8. Did you put up any corn at Boston or Charlestown? If yea, how was it put up? Describe the process.

Ans. If there was any put up there it was put up in the same way as at Eastport. We waited only a little while at Boston, till the building was ready at Charlestown. This was in 1849. No corn was put up at Charlestown by any other way than at Eastport. I had the preparation of the articles the same as at Eastport.

9. Did you know Charles Mitchell at Eastport and Charlestown, and what was his part of the business at those places?

Ans. I knew him at Eastport. He was the foreman of the whole department, and looked after the tin part and soldering and bathing. His department was the same at Charlestown.

10. How much corn was packed at Charlestown?

Ans. Very little. We were trying to get at a way of putting up corn, having heard that a man had done something of the kind at Portland.

11. Do you remember of any corn coming down to Eastport, in barrels, from Boston?

Ans. I do not.

12. Where did you get the corn you used at Eastport?

Ans. Round about there, from those that had gardens. They brought us in small lots.

300 13. Do you remember of seeing Charles Underwood about the factory at Charlestown? If yea, what was he doing? Did he have anything to do with the packing and preparation for packing of the different articles?

Ans. I do remember of seeing him. He generally had something to do with Mitchell; he used to come in and pay off the men. He had nothing to do with the preparing and putting up of the articles.

14. Was the factory left without any workmen in the season of '49, as far as you recollect?

Ans. Not to my knowledge.

15. Where did you first learn of the method of packing corn raw, as above described, and from whom?

Ans. It was in Portland. Samuel Rumery told me of it. It was called by all the packers in those days, that knew anything about it, the "Winslow method."

16. What was the chief business at the Underwood factory in Charlestown?

Ans. When I was there it was lobster and salmon, chiefly.

17. Was or not all the corn put up at Eastport and at Charlestown put up in the manner you have described?

Ans. It was. They did not know any other way. It was only a few cans each year. It was hardly a part of the business. That was just the beginnings of the thing.

18. How did you put up the corn at Lewis & Davis's?

Ans. By boiling on the cob before taking off the kernels. The same at Davis's.

Cross-interrogatories, by A. A. Strout, esq., counsel for defendant:

Int. 1. Do you recollect, and can you positively testify, that 1845 was the year that you was at Eastport?

Ans. I think I can.

301 Int. 2. Can you swear from your own knowledge what the method of putting up green corn was at Eastport before you went there in 1845?

Ans. No.

Int. 3. What did you do at Eastport besides painting and preparing the cans for market, if anything? State specifically what else you did.

Ans. I did prepare and help prepare the stuff.

Int. 4. Can you swear that you either husked, boiled, cut from the cob, packed in the cans, soldered, punctured, resealed, or took from the bath the corn in a single dozen cans of corn while you were in Eastport?

Ans. I husked, boiled, cut from the cob, and put the corn into the cans ready for the tinman.

Int. 5. Do you swear that you attended to all this, in addition to painting the cans and preparing them for shipment?

Ans. Yes.

Int. 6. Can you testify that the corn put up by you at Eastport was competing with the corn put by Nathan and Isaac Winslow by the Winslow process, at that time, or as late as 1847?

Ans. In late years I knew that it was in the market, and that it was competing with the corn put up by the Winslows; that is, that the corn put up at Eastport in 1847, or earlier, was in the market at that time competing with the corn put up by the Winslows.

Int. 7. By the Winslows you mean Isaac and Nathan Winslow?

Ans. Yes.

Int. 8. From your knowledge now, how early did the Winslows pack corn by their process for the market?

Ans. I know positively that they did so in 1850.

Int. 9. Did you puncture your cans at Mr. Lewis's?

Ans. I did not have that part of the business to do; therefore do not know.

J. R. FORD.

302 *Deposition of J. W. Jones, for complainant, taken February* 15, 1872.

I, JOHN WINSLOW JONES, of Deering, in the county of Cumberland and State of Maine, being duly sworn, in answer to interrogatories, on oath depose and say as follows:

Int. 1. Please state your name, age, residence, occupation, and whether you are one of the plaintiffs in this suit.

Ans. John Winslow Jones; age, forty-two; residence, Deering, Maine; occupation, packer of hermetically-sealed goods; am one of the plaintiffs in this suit.

Int. 2. State if you were acquainted with Isaac Winslow before his application for patent on preserving green corn; and if yea, how early and how intimately?

Ans. I did know him before that, from my early childhood to the time of his death. I was on intimate terms with him all my life, and knew all about his corn-packing.

Int. 3. Please state whether Isaac Winslow, the patentee named in this case, ever constituted any person or persons his agent or agents for the packing or selling of any corn preserved by his process, or gave any one any authority in connection therewith, prior to the years 1852 or 1853?

(Objected to, as a repetition of direct testimony, by R. K. Sewall, defendant's counsel.)

Ans. He did not to my knowledge, and I was intimately connected with him, and knew of and assisted him in all business in packing corn previous to 1852 and 1853, and he talked with me confidentially about his corn-packing. In 1852 and 1853 he made a contract with Nathan Winslow and myself, whereby we were to pay him a royalty of one cent on every can packed. And when we made this contract he told me he was opposed to any one being agent for his corn or having anything to do with it, as he had always intended to apply for a patent on the process, and it would interfere with his getting a patent; and he was
303 very well acquainted with the law in that respect, as he had looked the matter up, and managed it to a large extent in Washington himself.

(From the words "he made a contract," 5th line of the answer, to the end of that sentence, objected to as being a repetition of the direct examination, by R. K. Sewall, defendant's counsel.)

Int. 4. Please state whether or not you ever learned the practice of making a pin-hole or puncture in the cap of the sealed can, and placing the can in boiling water until steam began to issue, and then immediately closing the vent and then resuming the bathing; and, if yea, from whom did you learn it?

Ans. I did know of it; it was a part of the Winslow process, and I learned it from Isaac Winslow.

(Objected to as irrelevant, by R. K. Sewall.)

Int. 5. Please state the condition of the art of making cans from 1842 or 1843 to 1853.

Ans. They were very imperfectly made indeed. Can-making was but very little known at that time. Isaac Winslow employed a common tinworker, who worked in Nathan Winslow's stove-store, to make his. Many of the cans leaked, and were weak and imperfect; would often burst during the process of packing. I have lately seen cans used by Isaac Winslow's early packing, when the cans were perfectly good. I have opened them and found the corn sweet and good, which had been lying in one of Nathan Winslow's lofts for many years.

Int. 6. Please state at what time you and Nathan Winslow first began to offer the corn for sale in the market; and what knowledge, if any, there then existed in the market of such an article.

Ans. In 1852 and 1853. It was first offered in New York and Philadelphia regularly for sale. There was no knowledge of any such
304 article in the market at that time. I went to Boston, New York, and Philadelphia at that time. After this it became known as Winslow's corn in the trade, it being so intimately connected with Isaac Winslow and Nathan Winslow's names. Nathan Winslow's barter-trade in corn for other articles commenced about this time.

Int. 7. Please state whether or not, as late as 1851 or 1852, there were any regular can-makers, or demand for tin cans.

(Objected to as immaterial, by R. K. Sewall.)

Ans. There were no regular can-makers, nor demand for cans.

Int. 8. Please state what assistance, if any, Nathan Winslow rendered to his brother.

(Objected to as immaterial, both question and answer, by R. K. Sewall.)

Ans. He helped him pecuniarily, as Isaac had but very little money, and Nathan Winslow assisted him when all other Isaac Winslow's friends discouraged him.

Int. 9. Please state whether or not Nathan Winslow put up corn at any time under Isaac Winslow's direction.

(Objected to as repetition by R. K. Sewall.)

Ans. All the knowledge that Nathan Winslow had of packing corn he acquired from Isaac Winslow. He gave him no authority to pack, previous to the contract with Nathan Winslow and myself.

Int. 10. State why the practice of making the minute vent in the can-top was not adopted in practice entirely by Isaac Winslow.

Ans. Because by placing the can in hot water, so as to leave the top of the can above the water, to allow the air to escape with the vent open, was a very impracticable way of doing the business, as but very few cans could be packed in that way at a time.

(Objected to as immaterial by R. K. Sewall.)

Int. 11. State why, after 1852 or 1853, your corn was known by the title of Winslow corn.

305 Ans. Was then first introduced into the market under that name, not ever having been known in the market previously.

Cross examined by R. K. Sewall:

Int. 1. Do you mean to say, under oath, that you were present at every and all business interviews between Isaac and Nathan Winslow, and were cognizant of all their arrangements in relation to the putting up and sale of the corn preserved green?

Ans. I do not.

Direct resumed:

1. State whether, since the years 1852, 1853, or 1854, you have sold of your corn to Charles Underwood, and what reasons were assigned by him for purchasing of you?

Ans. I have for a number of years; and Mr. Underwood has more than once told me that corn packed by my process was better than any that he packed; and that he packed by boiling on the cob; then shelling off into the can and adding water; that he could buy cheaper of me than he could pack; that he had made several attempts to pack by the Winslow process, but did not succeed well.

J. W. JONES.

Deposition of Samuel Rumery, for complainant, taken 1872.

I, SAMUEL RUMERY, of Portland, in the county of Cumberland, and State of Maine, being duly sworn, in answer to interrogatories, on oath depose and say:

Int. 1. Please state your name, age, residence, and occupation; and if you are one of the plaintiffs in this suit.

306 Ans. Samuel Rumery; age, forty-six; residence, Portland; occupation, packer of hermetically-sealed goods, and have been since 1843. Am one of the plaintiffs in this suit.

Int. 2. Please state how long you have known the so-called Winslow process of preserving green corn.

Ans. Since about the year 1848.

Int. 3. State when you first began to practice the said Winslow process, and in partnership with whom.

Ans. I practiced it in 1853 and in 1854, in partnership with George Burnham, jr., of this city; had a little practice before, with Nathan Winslow, in Westbrook.

Int. 4. Of whom did you learn the so-called Winslow process?

Ans. Of Nathan Winslow.

Int. 5. State if you were acquainted with the market for canned articles in this country in the years 1852 and 1853, and before that time; and, if yea, state whether in the said years 1852 or 1853 the article of preserved green corn was known in the market.

Ans. I was pretty well acquainted with the market at that time. There was some corn sold, packed by the process of boiling upon the cob before putting in the can. I do not know of any sold, packed by the Winslow process, up to about 1853 or 1854.

Int. 6. State when and where you first saw any cans of preserved green corn, according to the Winslow process, (except in the possession of Mr. Winslow,) and what the quantity was.

Ans. In 1848 or 1849, in the fall, I saw about two dozen cans in the office of Grinnell, Minturn & Co., New York City. They told me they belonged to Nathan Winslow. I asked a question about the article, and they knew nothing about the quality of the article; had no opinion to give; the cans were not labeled.

307 Int. 7. Please state the character of the house of said Grinnell, Minturn & Co., whether large or small at that time, and whether they were at that time acquainted with this article of canned corn.

Ans. They were a first-class house, doing a large business. I think they did not deal in canned goods at all. They told me they knew nothing of the canned green corn. They told me the cans were left there by Nathan Winslow and they knew nothing about them. I think Grinnell, Minturn & Co. were engaged in shipping; in the California business, I think; I am not sure.

Int. 8. State if you learned, as a part of the said Winslow process, the practice of sometimes placing cans containing raw green corn, with the heads of the cans sealed, in boiling water, with a puncture or pinhole in the head of the cans.

Ans. I put up several small lots for Nathan Winslow in that way, under his direction.

Int. 9. State what difference there is, if any, in the effect upon the article, between this method and making the said puncture as soon as the contents of the can have become heated.

Ans. The quality of the goods is the same.

Int. 10. Please state what the object of making the puncture is, whether made at one time or another.

Ans. In order to solder a can and have it tight it is necessary to make a vent to let the expanded air, caused by the hot copper or soldering-iron, *to* escape. If there was not vent the heat would bubble the solder, and prevent the cans from being tight.

Int. 11. State whether or not the head or end of the can always has this minute puncture, up to the time the cans are ready for bathing.

Ans. They are always punctured before soldering and closed after soldering, in the way this is generally practiced, meaning the soldering of the cap.

308 Int. 12. Please state the reason that the small puncture was sometimes left open in 1849 or '50, as you have stated, when the cans were bathed.

Ans. Winslow had some cans which were very poorly made; the seams were not strong enough to stand much pressure, and in order to use those cans we were obliged to boil them with the hole open, to prevent them from bursting. There was no correct system of making cans at that time; they were mostly made by hand.

The defendants do not desire to cross examine.

SAMUEL RUMERY.

Deposition of James P. Baxter, for complainant, taken Feb., 1872.

I, JAMES P. BAXTER, of Portland, in the county of Cumberland and State of Maine, being duly sworn, in answer to interrogatories depose and say as follows:

Int. 1. State your name, age, residence, and occupation.

Ans. James P. Baxter; Portland; age, 40 years; packer of hermetically-sealed goods.

Int. 2. How long have you been in the business?

Ans. About eight years.

Int. 3. State how much corn you have preserved by the so-called Winslow process during that time.

Ans. Upwards of five million cans.

Int. 4. State if you have ever, in your business as a packer, made any experiments for the purpose of determining the relative merits of different processes; and, if yea, upon how many cans of corn.

(Objected to as irrelevant by defendant's counsel, Mr. Sewall.)

309 Ans. I have made numerous experiments, both personally and by others under my direction, upon several thousand cans.

Int. 5. State whether you have ever preserved corn by sealing the green, raw article in a tin can, leaving a small puncture or pin-hole in the top of said cans, then placing the said cans in boiling water, but not wholly submerging them, and then allowing them to remain in the water until the contents were so heated that steam would issue from the said puncture, then withdrawing the cans from the bath, and stopping the hole with solder, and then returning to the bath.

Ans. That has been done under my direction several times.

Int. 6. State what, if any, practical difference the said process produces upon the canned article from that produced by placing the can in the bath without the pin-hole, when the said latter method is properly practiced.

Ans. It is one and the same process; the hole in the one case being stopped a little sooner than in the other; and, when properly practiced, there is no difference.

Int. 7. State when you learned the so-called Winslow process, and when the modification above alluded to.

Ans. I learned it of Samuel Rumery, shortly after being connected with him in business, about seven or eight years ago. I learned them both at the same time. I know of no difference between the two, except the delay of one step.

Int. 8. Please state whether, practically, there is any resulting difference upon the canned article by reason of its contact with the atmospheric air in the can either when the can is put into the bath with or without the puncture.

Ans. If the air is allowed to escape from the can in which the puncture is sealed at the proper moment, there is no difference.

310 Int. 9. State whether or not the leaving of a pin-hole open in the top of the can is or has been practiced by packers pursuing the Winslow process; and, if not, please state the reason therefor.

Ans. It has been practiced to a very small extent, but it is impracticable in a large business. The Winslow process, the corn is taken in the milky state; the kernels cut from the ear so as to allow the juices to exude; the mass is then put into a can, and a cap having a small puncture placed upon the can and hermetically sealed. The can may then be placed in the bath, before the puncture is stopped, the water not being allowed to flow over the top of the can. After the can has remained in the hot water till the steam begins to escape, the hole is immediately stopped, and the can returned to the bath until the contents are properly cooked. This process is too slow, because only one tier of cans be processed at a time. As the great point is to get rid of the air from the can, it was found better, before placing the can in the first bath, to stop the puncture with a drop of solder, as several tiers of cans could be placed in the bath at once. When this is done, the cans were taken from the bath. When the air in the cans has become sufficiently expanded to allow of its escape, the little puncture previously stopped is re-opened, or another made, so that the expanded air can escape. The hole is restopped, and the cans returned to the bath until the contents are properly cooked. In both cases the result is the same, the air being allowed to escape in both cases, that being the principal object.

Int. 10. Please state, when any discoloration takes place in the contents of the can, from what the same results.

Ans. Discoloration takes place when the air is allowed to remain in the cans for too long a period.

311 Int. 11. State whether, when the can is placed in the bath with the puncture stopped, it is necessary to keep the can in the bath so long as to produce this discoloration, or whether the same is an error in the processing.

(Objected to as leading and immaterial, by Mr. Sewall, defendant's counsel.)

Ans. It is unnecessary to allow the can to remain in the bath until the contents are discolored; and when such discoloration takes place, it is owing to improper management.

Int. 12. How long does the proper state or condition for packing, according to the so-called Winslow process, as above described, of a single crop of corn continue?

Ans. When corn is in a proper state for canning, it remains so but a short time; two or three, or three or four, days at most.

Int 13. Please state how you are enabled, if such is the fact, to prolong a packing season for several weeks.

(Objected to as immaterial by defendant's counsel.)

Ans. We arrange for a succession of crops, first by having several grades of seed, early, medium, and late, planted at different times, so as to have successive crops, extending over a period of several weeks.

Int. 14. If a packer were to take the crop of corn in Maine, for instance, as it arrives at the proper state for packing, according to the Winslow process, without any previous arrangement of crops, supposing the temperatures were uniform, how many days in each year would the operator find the corn in a proper state for preservation?

(Objected to as immaterial by defendant's counsel, Mr. Sewall.)

Ans. To take a single crop of corn, planted without reference to a succession of crops, a packer could pack but a very few days, say three or four of each year.

312 Int. 15. State the condition of the market in this country as to knowledge of the article of preserved green corn about the time you first began to give attention to this matter as a practical man.

Ans. At the time when I first commenced the business practically it had begun to assume some importance in the market, but even then Winslow's process was not well known in 1862 and 1863.

Int. 16. State if you have ever packed corn which had passed beyond the milky state; and, if yea, how the same is treated.

(Objected to as immaterial by Mr. Sewall, defendant's counsel.)

Ans. Owing to the peculiar nature of this cereal, the juices evaporate to a certain extent within a very short time after reaching the proper state for packing; it therefore becomes necessary at some times, when corn has passed the proper stage, to resort to artificial means to restore it to the proper condition. A little water and sugar in that case is added, in order to supply the place of the water and sugar lost by evaporation or absorption.

Int. 17. Please state where corn was principally preserved at the time of your entering upon the business, as nearly as you can, and under whose method the same was practiced.

Ans. At that time corn was principally packed in the vicinity of Portland, under the Winslow process, as I have described. I found that there were a number of firms specially engaged in other branches of the business, who were dabbling to some extent with the article. But up to that time and several years later there was no one, to my knowledge, successful, except those in the vicinity of Portland, they not having learned the art practically. Indeed, the largest firm engaged in the business about that time lost a large portion of their product, and having made contracts for it, were obliged to come to Portland to pur-

313 chase in order to supply its place with the corn packed by Portland packers. The corn was as well known for years before that time and since as a Portland product, as boots and shoes are and have been as a Lynn product. The corn was principally packed under the Winslow process, and at that time I knew of no other process except by hearsay, Winslow being regarded as the father of the art of corn-packing. It was universally acknowledged among packers that Winslow was the first man who ever attempted to pack green corn, and I never heard this questioned until within a few years, and then only by parties whose interests clashed with those of the owners of the patents.

Cross-examined by Mr. R. K. Sewall, counsel for defense:

Int. 1. State the names of those firms whom you say were dabbling in the article when you commenced the business, and where they did the business.

Ans. Kemp, Day & Co., whose corn is now in the market. Some

corn having the title of the North Wayne Preserving Company. Another firm was Wells & Provost, and the Oneida Community, N. Y. I think all of those, just about that time. I have seen several other brands, but to a very small extent. Do not think I could name the packers.

Int. 2. With how many firms, companies, manufacturers or operators in packed green corn were you at that time personally acquainted with and cognizant of?

Ans. About six or eight, I should think. Those were outside of Portland and vicinity, principally engaged in other branches of hermetically-sealed goods, and secured corn as an experiment, and have since, without exception, abandoned it, I believe.

Int. 3. Did your acquaintance and cognizance of the parties extend to business relations with these parties; and, if so, what and to what extent?

314 Ans. With only one of the firms, Kemp & Day, did I have any business connection. I sold them corn and other hermetically-sealed goods.

Int. 4. What firms and parties in Portland and vicinity, at that time in the business of hermetically-sealed goods, were engaged in the packing of corn also, that you knew?

Ans. At the time I went into the business J. W. Jones, successor to Nathan Winslow & Co., did the principal business. Rumery & Burnham had been packing some corn, but were about undertaking the business on a larger scale, and then adopted Winslow's process, to the exclusion of all others. Lewis had been packing corn, but had abandoned it. This is all I knew of Portland packers in and about Portland.

Int. 5. Was George Burnham, jr., a member of the firm of Rumery & Burnham, packers, at this time?

Ans. He was.

Int. 6. Did you have any knowledge of, or acquaintance with, packers in this business in Massachusetts? and, if so, who were they, and where were they engaged?

Ans. I knew William Underwood & Co. and William K. Lewis & Brother; I used to be in their places of business, and talked with them about business, and knew that they purchased corn of J. Winslow Jones; and they both told me that they had abandoned the business of packing corn, and purchased all they used of Jones.

Int. 7. Did they tell you they purchased of Jones exclusively?

Ans. They did not use the word "exclusively."

Int. 8. Had you at that time had any business relations or transactions with them?

Ans. I had not.

Int. 9. Were you acquainted with the packing-firm of Treat, Noble & Co.?

Ans. I was not personally.

315 Int. 10. What business had you been engaged in prior to engaging in that of hermetically-sealed goods, and with whom, if anybody?

Ans. I was engaged with William G. Davis in business in this city, in the importation of foreign threads and cutlery and as agents for various American manufactures.

Direct examination resumed by William H. Clifford, counsel for plaintiffs:

Int. 1. Please state the reason, if any, assigned by the Underwoods,

at the time you have referred to, for their preferring to buy the canned corn of Jones rather than to preserving it at their own factory.

Ans. They gave as a reason that it was dangerous stuff to handle, and that it was more profitable to purchase in Portland; and also that another reason was that Portland corn had an established reputation in the market.

Int. 2. State whether anything was said concerning the difference in the canned article or the method by which it was prepared by these parties.

(Objected to as leading by R. K. Sewall, defendant's counsel.)

Ans. I remember that Lewis stated they could not depend upon the article produced, and he would rather have somebody else take the risk. Charles Underwood was the one I knew at that time. I don't remember that he ever stated anything to me except that it was a risky article to handle, and he did not think it paid them to pack it.

Int. 3. State generally the character of the packing business practiced by the Underwoods; and whether they are or have been preservers of green corn.

Ans. They are manufacturers of pickles, importers of champagne. Hermetically sealing is also a branch of their business. I have no personal knowledge of their ever having packed any green corn. I have never heard of their packing any since I have been in the business.

316 Cross-examination resumed by R. K. Sewall, defendant's counsel:

Int. 11. When did you first become acquainted with Underwood Company, or have any business conversations with them?

Ans. Not until after I went into the business; within a few months after I went into the business.

Int. 12. Please fix the dates of the conversations you have narrated between yourself and Underwoods and Lewis in regard to packing green corn.

Ans. It was between August and November of the first year I packed, I think, but it might have been the next corn-season.

Direct examination resumed by W. H. Clifford, counsel for plaintiff:

Int. 4. Please state the object of having the pin-hole or puncture in the cap of a can containing heated green corn, whether the said puncture be made previous to the process of heating the said contents or immediately when the heating is completed.

Ans. The object is simply to allow the escape of the expanded air. When the cap is sealed on the can there is always a small puncture in the cap, as the hot copper would expand the air and cause the solder to bubble up, and prevent tight-work, when the cap is soldered on. The question then arises how to get rid of the air in the can. This may be done by setting the can in hot water, without stopping the hole, which is allowed to remain open till the expanded air escapes. The other way is to stop the hole, and when the air is expanded within the can we again open the puncture, so as to allow the expanded air of the can to escape. The same result is achieved in both cases.

JAMES P. BAXTER.

317 UNITED STATES OF AMERICA,
Maine District, First Circuit.

OFFICE OF THE CLERK C. C. U. S.,
Portland, Maine.

I, Geo. F. Emory, clerk of the circuit court of the United States for the district of Maine, hereby certify that the foregoing (from pages 60

to 316, inclusive) contains a true & perfect copy of all the proofs exhibited to the court at the hearing of the cause in equity to which they relate, as appears of record.

In testimony whereof I have hereunto set my hand and affixed the seal of said court this sixth day of August, A. D. 1873.

Attest: GEO. F. EMORY, *Clerk.* [SEAL.]

318 Maine district, April term, 1873. Clifford, J.

JOHN W. JONES ET AL.
v.
RUFUS K. SEWALL, ADMINISTRATOR OF HENRY Clark. } In equity.

CLIFFORD, *J.:*

Inventions lawfully secured by letters-patent are the property of the inventors, and as such the franchise and the patented product are as much entitled to legal protection as any other species of property, real or personal. They are indeed property even before they are patented, and continue to be such, even without that protection, until the inventor abandons the same to the public, unless he suffers the patented product to be in public use, or on sale, with his consent and allowance, for more than two years before he files his application for a patent. (5 Stat. at Large, 123; 5 Ibid., 354.)

On the eighth of March, 1853, Isaac Winslow, of Philadelphia, filed in the Patent-Office an application for a patent for "a new and improved mode of preserving green corn," in which he stated that
319 he had invented a new and useful improvement for accomplishing that object, and prayed that letters-patent might be granted to him for that invention. Certain portions of the invention were not illustrated either by drawing or models, and in consequence of that omission the application, on the first of August following, was returned to the inventor, leaving it to his option to supply the omission or to modify his claim. He elected to supply the deficiency, and on the twenty-sixth of October succeeding he filed in the Patent-Office additional drawings and a model of the invention, and samples of the patented product. Information from the Patent-Office was communicated to the inventor on the second of November, in the same year, that the Office did not regard the operation of cutting the corn from the cob as any part of the process of preserving the product, and requesting him to decied whether the Office should examine the process of preserving or that of removing the corn from the cob under the fee already paid, evidently showing that the Office required another fee, if both were to be examined. Compelled to elect a second time, the applicant decided to strike out his second claim, and consented to take a patent for the process of preserving the patented product. Nothing further was done until the nineteenth of the same month, when the Patent-Office informed the applicant that the Office was of the opinion that his process was substantially the same as that in common use for preserving both vegetable and animal substances. On the eighteenth of February, 1862, the inventor filed in the Patent-Office a new application for a patent, referring to the fact that his prior application, as modified, was rejected, and renewing the prayer that letters-patent might be granted to him for the entire improvement. In the mean time, the inventor assigned the business over to his brother and the complainant, with the stipulation that he would give the assignees the benefit of any improvement he should make, and of his knowledge of the new process. Before the

320 second application for a patent was made the entire inventions were duly assigned to the complainant, and it is proper to remark that the title of the complainant is admitted.

Four several letters-patent were granted for the inventions, and they were all issued in the name of the inventor, but each contains the recital that he had assigned all his right, title, and interest in the invention to the complainant. They are as follows: 1. No. 34928, dated April 8, 1862, for a new and useful improvement in preserving Indian corn in the green state. 2. No. 35274, dated May 13, 1862, for a new and useful improvement in preserving green corn. 3. No. 35346, dated May 20, 1862, for a new and useful improved process of preserving green corn. 4. No. 36326, dated August 26, 1862, for a new and useful improvement in the process of preserving green corn. Possessed as he is of the absolute title to those improvements, the complainant claims the full and exclusive right and liberty of making and using the said improvements and vending the same to others to be used, and he charges that the respondent named in the bill of complaint, then in full life, from the thirteenth of September, 1867, to the nineteenth of November, in the same year, unlawfully and wrongfully used and practiced the described improvements claimed and patented by the complainant. Service was made, and the respondent appeared and filed an answer. Amendments were made to the bill, by consent, admitting new complainants, and also to the answer, allowing the respondent to set up new defences. Reference will only be made to such of the defences set up in the answer as were pressed in argument at the hearing. Argument to show that the title of the complainant is valid is unnecessary, as that is admitted by the respondent, and, the complainant having introduced in evidence the several letters-patent described in the bill of complaint, it is

321 conceded that they afford a prima-facie presumption that the patentee is the original and first inventor of the several improvements therein described and secured to the supposed inventor. Much consideration need not be given to the question of infringement, as the respondent admits that his foreman, though, as he alleges, without his consent, put up certain parcels of green corn preserved substantially by the same process as that described in the specification of the patentee, and substantially the same as covered by his patents, amounting to seven hundred cans, which have been sold, and the proceeds and profits have been received by the respondent, as stated in the account annexed to the answer. Unless the patent is sustained the question of infringement is an immaterial issue, and where it is admitted, and the case shows that profits have been received by the respondent to a substantial amount, the question of the extent of the infringement is usually left to be determined by the master. Viewed in the light of these suggestions it is quite clear that the case depends upon the defences set up in the answer, as, if no one of them is sustained, the complainants are clearly entitled to a decree.

They are as follows:

1. That the patentee was not the original and first inventor of the improvements, or either of them, as alleged in the bill of complaint.

2. That the several supposed improvements are merely old methods applied to a new use, and that the several improvements, and each of them, were well known and in public use prior to the alleged discovery nvention of the patentee.

3. That the several improvements were in public use and on sale more than two years before the patentee made his application for a patent.

322 4. That the patentee abandoned his invention to the public before he filed his application for a patent.

Application was made by the inventor, in the first place, for one patent, to embrace all the several subject-matters described in the four patents subsequently granted by the Commissioner of Patents. Novelty and utility are both required to constitute a patentable invention within the meaning of the patent-law, but where both of those qualities are combined it is settled law that the right to a patent does not depend upon the "quantity of thought," ingenuity, skill, labor, or experiment, or the amount of money which the inventor may have bestowed or expended upon his production. (Curt. on Pat., sec. 31.)

Defences involving the validity of a patent cannot be satisfactorily examined, or their sufficiency or insufficiency determined, without first ascertaining what the invention is, which is embodied in the patent, constituting the subject-matter of the controversy.

I. Undoubtedly, the first patent is for the product of the invention, or for the new article of manufacture, to wit, Indian corn preserved green, or Indian corn preserved in the green state. In his first attempt to preserve the corn in the green state, without drying the same, the patentee states that he did not remove the kernels from the cob, which was not satisfactory, as the article obtained was very bulky, and when used the peculiar sweetness of the corn was lost, the same being absorbed, as the patentee supposes, by the cob. Experiments of various kinds were subsequently made to overcome the difficulties attending the effort to preserve the corn without drying the same, which were also unsuccessful, as the kernels, when preserved, did not retain the milk and other juices of the corn, leaving the product hard, insipid,
323 and unpalatable, and without the full flavor of fresh green corn.

All such experiments were abandoned, but he finally succeeded in producing an entirely satisfactory article of manufacture, which is the one described in the specification and claim of his first patent. His description of the method of manufacturing the product is substantially as follows: Select a superior quality of sweet corn, in the green state, remove the kernels from the cob by means of a curved and gauged knife or other suitable means, pack the kernels in cans, and hermetically seal the latter, so as to prevent evaporation under heat, or the escape of the aroma of the corn. When packed the cans of corn are to be exposed to steam or boiling heat for an hour and a half, then puncture the cans, and immediately seal the same, while hot, and continue the heat for two hours and a half longer. Afterwards the cans may be slowly cooled in a room at the temperature of seventy to a hundred degrees Fahrenheit. Indian corn thus packed and treated, the patentee states, may be warranted to keep in any climate. Being preserved in its natural state as near as possible, it retains the peculiar sweetness and flavor of fresh green corn right from the growing field, and it is only necessary to heat the corn in order to prepare it for the table, as it is fully cooked in the process of preserving. What the patentee claims in that case is the described new article of manufacture, to wit, Indian corn when preserved in the green state, without drying the same, the kernels being removed from the cob and packed in cans, hermetically sealed, and treated substantially in the manner and for the purpose set forth in the specification.

II. Attention will next be called to the second patent, which purports to embody an invention for a new and useful improvement in preserving green corn, or, in other words, the patented invention is for the
324 process of manufacturing the new product described and patented

in the first-mentioned letters-patent. Necessarily the details of the process are somewhat fully given in the specification describing the patented product, but the claim of the first patent does not extend to the process, which shows that the Patent-Office committed no error in granting the second patent, as it does not include anything patented in the first patent. (Goodyear v. Providence Rubber Co., 2 Cliff., 371; same case, 9 Wall., 788; Seymour v. Osborne, 11 Wall., 559.)

Both parties agree that it is competent for the Commissioner to grant a patent for the product and one for the process, and it is obvious that the patent under consideration is for the process, which is not included in the prior patent. It has long been common, says the patentee, to boil green or unripened corn, and then to dry the same for winter use; but corn thus dried must be boiled again, when prepared for the table, and is more or less hard and insipid, as it loses the fine flavor of fresh green corn. Ears of corn, also, are sometimes boiled and then hermetically sealed in cans, but the cob seems to absorb the sweetness of the kernels, or, if the kernels are removed from the cob after boiling, and then preserved, still the fine flavor of the natural corn is lost. Many and varied attempts were made by the patentee to preserve green corn on the cob, without drying the same; but all those efforts were unsuccessful, as the article was bulky, and the sweetness of the corn was absorbed by the cob. Subsequently, he conceived the idea of first removing the corn from the cob, and then boiling or cooking the kernels and preserving them as thus separated from the cob. Some benefit doubtless resulted from that new conception, but a new difficulty arose, as the kernels of corn were broken in being removed from the cob,
325 and the milk and other juices of the corn were dissolved and diluted in the process of boiling, leaving the product insipid and unpalatable. Unable to overcome that difficulty in that mode, he next attempted to cook the corn, without permitting it to come in contact with the water, by exposing the cans containing the corn to boiling water; but he soon found that mode of preserving the corn was unsatisfactory, as a long time was requisite to cook the corn sufficiently for preservation, and it appears that the milk of the corn evaporated and the corn became more or less dried.

Two other patents are set forth in the bill of complaint, but it is clear that the patents are each for the new and useful improvement in the process of preserving green corn, and that they severally embody substantially the same invention as that described in the second patent. Improvements, consisting of separate and distinct parts, may, n certain cases, be secured by separate and distinct patents, but no more than one patent can legally be granted for the same invention. (5 Stat. at Large, 192; Sickles v. Falls Co., 4 Blatch., 508.)

Inoperative patents, or such as are invalid by reason of a defective or insufficient description or specification, may also in certain cases be surrendered, and the Commissioner, in such cases, is authorized to cause a new patent to be issued to the inventor for the same invention; but the Commissioner does not possess the power to grant a second patent for the same invention, in any case, nor under any circumstances, without the surrender of the first one granted to the patentee. (Suffolk Co. v. Hayden, 3 Wall., 319; 5 Stat. at Large, 122.)

Apply those principles to the case, and it is certain that the third and fourth patents described in the bill of complaint are void.
326 More than one patent for the same invention cannot be legally issued by the Commissioner, but the irregular issuing of a second patent cannot impair the right of the patentee under the first patent, if

it was valid at the time it was granted. Tested by these rules of decision it is quite clear that the bill of complaint, as to the third and fourth patents, must be dismissed; but that the complainants are entitled to a decree, for an account, and for an injunction for the infringement of the first and second patents, unless the defences, or some one of them, set up by the respondent, are sustained.

I. First defence is, that the patentee is not the original and first inventor of the respective improvements. Both patents may be considered together, as all the proofs applicable to one apply equally to the other, and the positions taken in argument are the same in both, without an exception. Before examining that defence, it becomes necessary to refer somewhat more fully to the nature and peculiar characteristics of the respective improvements in question, in order that the evidence adduced may be fully understood and properly applied. Ears of corn may be boiled and hermetically sealed in cans, without infringing the inventions of the patentee, but the difficulty with that product and the process which produces it is, that the cob absorbs the sweetness of the kernels and the article becomes insipid and unpalatable, and consequently it is not salable to much extent. So the kernels may be removed from the cob after boiling, and then be preserved in cans hermetically sealed, without any conflict with the improvements embodied in the patents described in the bill of complaint, but the process, and the product which it produces, are comparatively valueless, as the fine flavor of the green corn cooked in the usual way is lost in the process of manufacture.

Corn may also be preserved, when in a green state, by remov-
327 ing the kernels from the cob, and boiling or cooking the same, before the kernels are packed in cans hermetically sealed, without subjecting the manufacturer to the charge of infringing these patents; but the difficulty with that process is, that the kernels, in being removed from the cob, are broken, and consequently the milk and other juices of the corn in that state are dissolved out in the process of boiling or cooking, and the natural aroma of the green corn cooked in the usual way for the table is lost, and the product becomes of little or no value as an article of commerce. Attempts were made by the patentee in this case to remedy that difficulty, by packing the kernels in cans not sealed and exposing the cans containing the kernels to boiling water, but the process was unsatisfactory in other respects, as it required a long time to cook the corn, during which the milk and other juices evaporated, and the corn became more or less dried. All experiments of such kinds having failed to produce the desired result, the inventor adopted the process of removing the corn from the cob, packing the kernels in cans, hermetically sealing the same, and then boiling the cans until the corn therein became completely cooked; but he states that the cans must be very strong or they may burst; and to prevent that, he practiced puncturing them, after they became well heated, to allow the air to escape, immediately resealing the same, to prevent the evaporation of the juices of the corn or the loss of the natural aroma. Cans, if sufficiently strong, it would seem may be used to complete the process, without the necessity of their being punctured after the boiling is commenced, but, unless the cans are very strong, it is better to puncture them, in order to relieve the internal pressure, and to prevent them from bursting. Even if the cans, when not punctured, as described, do not burst, the air contained in the cans and the vapor become more or less expanded by the heat, so as to press the heads of the can outward, and
328 giving the same the appearance of cans which contain the gaseous

products of decomposition. Such appearances, even when the corn is perfectly preserved, diminish its value as an article of commerce, which shows that it is better to puncture and reseal, the cans, during the process of boiling, unless the cans are very strong.

Taken as a whole, the description in the specification of the respective patents constitutes a full compliance with the requirement of the act of Congress in that behalf, showing that the claim of the patentee in the first patent is the described new article of manufacture, to wit, Indian corn, when preserved in the green state, without drying the same, the kernels being removed from the cob, hermetically sealed, and heated substantially in the manner and for the purpose set forth, which is well justified by the description of the invention given in the specification.

His claim in the second patent is for the described process of first removing the corn from the cob, and then preserving the kernels, substantially in the manner and for the purposes set forth, which is also well supported by the antecedent description contained in the specification, to which it is appended. Viewed in any proper light, it is clear that the purpose of the invention, as evidenced by the language of the description throughout, is to preserve not only the farinaceous elements of the kernels, but also the milk and juices of the same, which give the peculiar aroma or flavor to green corn when cooked for the table in the usual way, during the season when the kernel is full grown, or nearly so, but before the milk and juices of the kernel become concrete, as in ripe corn. Beyond all doubt the patented process, if the directions are properly followed, will accomplish the purpose for which it was invented, and will enable the manufacturer to preserve the kernels of green corn with all the milk and other juices of the same, without any chem-
329 ical or other change, except what is produced by the cooking, which is effected by putting the sealed cans containing the kernels, with their milk and other juices, just as the same were removed from the cob, into boiling water, and keeping the cans with their contents in the boiling water for the period or periods specified in the descriptive part of the specification. Proof to that effect, of the most satisfactory character, is exhibited in the record, and the patented product, as seen everywhere in daily use, fully attests its accuracy and truth. Sufficient has been remarked to show what the improvements are which give rise to the present controversy, and having accomplished that purpose, the next inquiry is whether the patentee is the original and first inventor of the respective improvements.

Tested merely by the pleadings, the affirmative of that issue is upon the complainants, but the complainants having introduced the original letters-patent under which they claim, the rule is well settled that the burden of proof is changed, and that it is incumbent upon the respondent to show, by satisfactory proof, that the patentee is not the original and first inventor of the respective improvements, as he, the respondent, has alleged in his answer. Evidence was introduced by the complainants of the most satisfactory character, showing that the patentee, Isaac Winslow, of Philadelphia, discovered the patented process of preserving green corn early in the year 1842, and that he made successful experiments in reducing his invention to practice at Westbrook, in the State of Maine, during the latter part of the summer, or in the early part of autumn of that year, leaving no doubt that the process discovered was the same as that described in the second patent on which the suit is founded, and that the results were satisfactory to a limited extent. All doubt as to the date of those experiments is removed by the statements of the witnesses as to the attending circum-

330 stances, which could hardly fail to impress the memory so as to prevent unintentional mistake, and there is no reason disclosed in the proofs to create any distrust as to the integrity of the deponents. Though a resident of Philadelphia, the patentee sometimes went abroad for temporary periods, and in the spring, prior to making those experiments, he wrote from France to his brother-in-law, living at Westbrook, in the State of Maine, requesting him to plant a piece of ground with sweet corn, evidently for the purpose of securing the means of making such experiments, and testing the utility of the new process which he had invented, and it appears that his brother-in-law complied with his request. Pursuant to that arrangement, he visited his brother-in-law, at Westbrook, towards the close of the summer, or early in the fall of that year, and commenced to make experiments to preserve green corn, occupying for that purpose a building situated on the same farm which had previously been used as a cord-factory. He worked less than a week that season, and the experiments, to a large extent, were unsatisfactory, as the cans in which the corn was packed were not strong enough to resist the pressure within, occasioned by the boiling. Attempts were made to preserve the corn by cooking it before it was packed in the cans, both by cooking it on the cob and then removing the kernels, and also by first removing the kernels and then boiling the same, but all of those experiments proved to be wholly unsatisfactory, as all or nearly all of the corn in the cans spoiled, and all such as was not spoiled was found to be insipid and comparatively tasteless, and of little or no commercial value. Experiments were also made by cutting the kernels of the freshly-gathered green corn from the cob, with a gauged knife, and packing the same with their milk and other juices, in cans hermetically sealed, just as the kernels came from the cob, and cooking the same by placing the cans with their contents in a large vessel containing
331 boiling water, and most of those experiments, when the cans proved to be strong enough to resist the inward pressure during the process of boiling without bursting, were generally satisfactory. Few or none of the cans were properly constructed, and many of them burst during the process of boiling, and in consequence of that tendency, the patentee found it necessary to take the cans out of the bath before the process of cooking the corn was completed, and to puncture or vent the cans, as described in the specification, immediately resealing and replacing the same in the receptacle of boiling water, until the contents of the cans were cooked sufficiently for table use; and the proofs show that when the cans were temporarily vented in that way the experiments were generally successful. Such experiments were repeated the next year for a few days, during the proper season, and from year to year, to the autumn preceding the time when the patentee made his application for letters-patent.

Practical experience showed that the process subsequently patented was much the most successful in accomplishing the desired object, but the process required strong cans, to prevent them from bursting during the boiling, even when the cans were temporarily vented, as described; and it was a long time before the manufacturer was able to furnish the inventor with an article properly constructed for the purpose, as fully appears from the testimony of the manufacturer of the cans, who was examined as a witness. Application for a patent was filed in the Patent-Office, by the inventor, on the eighth of March, 1853; but the first claim was neither illustrated by drawings nor by a model, nor did the applicant forward to the Patent-Office any specimens of green corn preserved

by his process, and the specification, on account of those omissions, was returned to the applicant, leaving it at his option to supply the deficiencies, or to modify his claim. He elected to supply what had been
332 omitted when the application was filed, and on the twenty-sixth of October, in the same year, filed in the Patent-Office additional drawings, together with a model of the invention and samples of the preserved green corn, and requested an early examination of the application and claims. Doubtless the proper officers of the Patent-Office complied with his request, as they returned the specification on the second of November following, informing him that the Office did not regard the operation of cutting the corn from the cob as any part of the process of preserving the same, and requested him to decide which part of the alleged invention the Office should examine, whether the process of preserving the product or that of removing the corn from the cob. Obliged to waive one for a time, he struck out the second claim, which covered the process for removing the corn from the cob, and on the fourth of the same month returned the specification, as amended, expressing the hope that the Office would be enabled to decide favorably on the remaining claim without delay. His hopes, however, were not realized, as the Office, on the nineteenth of the same month, rejected the amended application, expressing the opinion that the alleged invention was substantially the same as that in common use for preserving meats and vegetable substances. Except an occasional visit of the patentee to the Patent-Office for the purpose of consultation with the Commissioner, or examiners, nothing further was done by him to procure a patent until the eighteenth of February, 1862, when he filed in the Patent-Office a second application for a patent, which in substance and effect is the same as the one previously filed by the same party, and which, like the other, seeks to procure letters-patent for the entire invention. Before the rejection took place the claim for the product had been stricken out, so that the claim for that part of the invention had never been the subject of decision by the Patent-Office. In view of the circumstances,
333 the Commissioner decided to review the whole case, and came to the conclusion that the proofs before him entitled the applicant to letters-patent, both for the product and for the process, as shown in the two patents under consideration.

Two other patents were also issued to the same party, but the court is of the opinion that they are invalid, as having been issued for the same invention as that described in the specification of the second patent. Repeated decisions have established the rule that a patent duly issued, when introduced in evidence by the complainant in a suit for infringement, is prima-facie evidence that the patentee is the original and first inventor of what is therein described as his invention, and when taken in connection with his original application, is prima-facie evidence that the invention was made at the time the application was filed; but when the patentee proposes to show that his invention is of a date prior to the time when he filed his original application, he takes upon himself the burden of proof, and to maintain that theory as against another patented improvement of the same construction and mode of operation, he must prove not only that he made his invention at the period claimed, but that he reduced the same to practice as an operative machine. (Johnson v. Root, 2 Cliff., 116.)

Suppose that is so, still the respondent cannot invoke that principle with much effect in this case, as he does not preserve green corn under a patent, and the proofs are entirely satisfactory that the patentee made the invention more than ten years before the appli-

cation for a patent was filed in the Patent-Office. Great difficulty was experienced by the patentee throughout the whole period in procuring cans properly constructed for the purpose, and the proofs show that it was that imperfection and difficulty more than any other, which prevented him from making an earlier appli-
334 cation for a patent. Much examination, in detail, of the parol proofs introduced by the respondent to show that the patented process was known or used in the United States before the early experiments made by the patentee may well be omitted, as it is not pretended, nor can it be, that any other person, resident in this country either before or since that time, ever invented such a process; and a careful scrutiny of the evidence given by those witnesses as to what was in fact done by the several deponents will show that no one of them ever preserved any green corn in the mode of operation circumstantially described in the specifications of the patents, until the witness, in some way and to some extent, became acquainted with the process of the patentee, either from rumor or from some one who had assisted the patentee in making those experiments, and in most cases not until years after the invention was made, and in some cases long after the patentee had filed his application for letters-patent in the Patent-Office. Careful analysis of the testimony of those witnesses shows that many of them never practiced the patented mode of operation at all, as they cooked the corn before the kernels were packed in the cans, and that all those who ever did practice it any degree, or ever made any near approximation to it, never commenced to preserve green corn in that way until they had learned something, by rumor or otherwise, concerning the mode of operation which was practiced by the patentee. They do not pretend that they invented anything of the kind, but all they claim is, that they were successful in learning what the process was which was practiced by the assignor of the complainants. Beyond all doubt, the patentee was the original and first inventor of the process in the United States, and sufficient appears, even in the proofs introduced by the respondent, to convince the court that the first knowledge which those witnesses ever had of the patented process was procured, directly
335 or indirectly—as by report or rumor—from persons residing near the place where the experiments of the patentee were made, or who had at some time been the employés of the inventor, and had assisted in his experiments. Suppose it to be true that the patentee was the first person in the United States who practiced the patented process and preserved green corn in that mode of operation, still, it is contended by the respondent that he is not the original and first inventor of the improvement within the meaning of the patent-law, as the process had been previously known and used in some foreign country; but the decisive answer to that suggestion is, that the mere previous knowledge or use of the thing patented in a foreign country will not defeat a patent issued here to an original inventor, unless it appears that the same invention had been patented in such foreign country or had been described in some public work anterior to the supposed discovery thereof by the patentee; and it is well settled law that patented inventions cannot be superseded by the mere introduction in evidence of a foreign publication, though of a prior date, unless the description or drawings contain or exhibit a substantial representation of the patented improvement in such full, clear, and exact terms as to enable any person skilled in the art or science to which the improvement appertains to make, construct, and practice the invention to the same practical extent as he would be

enabled to do if the information was derived from a prior patent. (Seymour *v.* Osborn, 11 Wall., 555.)

Next, the respondent insists that the process described in the English patent to Peter Durand supersedes the invention of the assignor of the complainant as a prior discovery and for the same improvement. Vegetable substances intended to be subjected to that process, the specification states, are to be put into the vessels selected for the purpose, in the
336 raw or crude state; but the patentee, in enumerating the articles to be preserved, does not mention green corn, nor does he state whether the kernels are, or are not, to be removed from the cob, or, if to be removed, whether the removal is to be effected in a manner to leave the kernels unbroken, or by means of a gauged knife, as in the mode of operation described in the complainant's patent, nor is any mention made of preserving green corn, or any other vegetable substance, in the natural juices of the article, as in the mode of operation set forth in the patent mentioned in the bill of complaint. Instead of packing the kernels in the vessels selected for the purpose, in their crude state, as suggested in the English patent, the process patented by the assignor of the complainant directs that the kernels should be cut from the cob, in a way which leaves a large part of the hull on the cob, and breaks open the kernels, liberating the juices, to use the language of the patentee, and causing the milk and other juices of the corn to flow out and surround the kernels, as they are packed in the cans, in such a mode that the juices form the liquid in which the whole is cooked, when the cans are subjected to the bath of boiling water.

Evidently much is due to this feature of the patented mode of operation in preserving the product, and causing it to retain the sweetness, peculiar flavor, and natural aroma of green corn as when fresh gathered in the season and boiled for the table, in the ordinary way for family use. Nothing of the kind is suggested in the other specification, and it is quite clear that a careful comparison of the descriptions given of the inventions, in the respective specifications, fully justifies the opinion of the learned expert examined by the complainants, that the two patents are essentially and substantially unlike, to which it may be added, that persons having no other knowledge of the complainant's process
337 than what they derive from perusing the specification of the other patent, would never be able to preserve green corn by that mode of operation. Palpable as these differences in the mode of operation are, they cannot properly be overlooked in determining the issue under consideration, nor are they merely formal, as the proofs are full to the point that the product manufactured by the process of the complainant is far superior to that preserved in any other known mode. Other vegetables, such as beets and carrots, or peas and beans, may be packed in the cans in a crude state, as they retain their juices, and may be well preserved, if entirely secluded from the atmosphere, as by packing them in vessels hermetically sealed, but their chemical composition is very different from green corn, which is much more difficult to preserve in its natural freshness without loss of its peculiar flavor and aroma, as accomplished by the complainant's process. When the kernels are cut from the cob, they are opened, and the milk and other juices of the same flow out, and become a constituent part of the vegetable substance to be preserved, and, if exposed to air in that state for any considerable time, their chemical relations to each other will soon change, and the whole substance will become sour. Exposure to heat, if seasonable, will remove that tendency, as the relations of the elements of which the substance is composed will become fixed, and the

danger of putrefaction or souring will be greatly lessened, or entirely averted.

Throughout his experiments the aim of the patentee was to perfect the process of preserving green corn without losing any of the natural juices of the cereal, and to discover the method or means of fixing the elements of the corn in the milky state, so that when packed in vessels, to be preserved, their chemical relations to each other would never change unless the vessels containing the corn were
338 opened. Obviously he could not accomplish that purpose by putting the corn into cans in the crude state or before it was removed from the cob, as the juices of the kernels would be absorbed by the cob in the cooking, nor could he accomplish his object by cutting the kernels from the cob and boiling them in water before they were packed, or by cooking them in open vessels, without water, as in the one case the milk would be washed out of the kernels and with it all the peculiar flavor of green corn, and in the other case the aroma and juices of the cereal in the green state would be lost by evaporation. Suggestion is made that the kernals may be removed from the cob without cutting, and, if packed in cans in that state before being cooked, they may be regarded as having been packed in the crude state, which may perhaps be conceded; but two answers are made to that suggestion, either of which is sufficient to show that the suggestion cannot serve to benefit the respondent.

1. Because that process is substantially different from the complainant's process.

2. Because the proofs on both sides show that the product, when the green corn is preserved in that mode of operation, is of a very inferior quality, not much better than the product when the corn is boiled before it is packed.

Viewed in the light of these suggestions, and of the expert testimony in the case, which corresponds with the same, I am of the opinion that the patents of the complainants are not superseded by the aforesaid foreign patent introduced by the respondent.

2. Enough has already been remarked to show that the second defence cannot be sustained, as the evidence introduced to show that the patentee is the original and first inventor of the improvements is equally persuasive and convincing to disprove the theory that the inven-
339 tions are old ones applied to a new use, which is all that need be said upon the subject. Nor is any argument necessary to show that the other defence embraced in the same proposition must be overruled, as there is no evidence in the record to support the theory that the improvements, or either of them, were well known or in public use prior to the alleged discovery and invention of the patentee. Attempts were doubtless made by various persons to preserve green corn prior to the date of the invention in controversy, but it is so manifest to every impartial inquirer that they were of a character substantially different from the process and product patented by the assignor of the complainant, that it would be a work of supererogation to repeat the explanations which demonstrate the truth of that proposition. Such an issue cannot be properly investigated and determined without first ascertaining what the patented invention is, but the moment that preliminary inquiry is solved the whole difficulty disappears, as it at once becomes self-evident that none of the methods previously practiced embraced the mode of operation invented by the patentee.

3. Patents otherwise valid may be avoided in a suit for infringement by proof that the invention was in public use and on sale more than

two years, with the consent and allowance of the patentee, before he filed his application for a patent, which is the next defence presented by the respondent. Inventions ceased to be patentable, at one time, if permitted to pass into public use, or to be on sale, for any time, with the consent and allowance of the patentee before his application for a patent, but the more recent act of Congress provides that such public use or sale shall not have any such effect, unless it was continued for more than two years prior to such application. (5 Stat. at Large, 123; 5 ibid., 354.)

340 Full proof that an invention had been in public use, or on sale, with the consent and allowance of the inventor, for more than two years before the application for a patent was filed in the Patent-Office, is a good defence to such an action, if the same is properly alleged in the answer. (Agawam Co. v. Jordan, 7 Wall., 607. McClurg v. Kingsland, 1 How., 209. Stimpson v. Railroad, 4 How., 380. Shaw v. Cooper, 7 Pet., 318.)

Nothing short of proof that the invention was on sale, or in public use, with the consent and allowance of the inventor, for a period exceeding two years, will support such a defence, as the party charged with infringing the rights of an inventor must bring himself fairly within the words of the act of Congress, which justify the acts charged as an infringement. (Ryan v. Goodwin, 3 Sum., 518.)

Such acts, if done without the consent and allowance of the inventor, are plain violations of his rights, and of course will not afford any justification to a subsequent wrong-doer. (Wyeth v. Stone, 1 Story, 282.)

If the sale or use is without the consent or allowance of the inventor, or if the use is merely experimental, to ascertain the value, utility, or success of the invention, by putting it in practice, that is not such a sale or use as will deprive the inventor of his title. (Ryan v. Goodwin, 3 Sum., 518. Pitts v. Hall, 2 Blatch., 229. McCormick v. Seymour, 2 Blatch., 240.)

Such acts of an inventor, it is well held by Judge Story, are to be liberally construed as acts of an experimental character, nor is

341 the inventor to be estopped by allowing a few persons to use his invention to ascertain its utility, or by any such acts of use or indulgence to others to use the same, as are not inconsistent with the clear intention to hold the exclusive privilege, and to secure the same by letters-patent. (Mellus v. Silsbee, 4 Mason, 111.)

Where the party has subsequently taken out a patent, the court is not authorized to give effect to such a defence to a charge of infringement, except in cases where the proof is clear and cogent. (Wyeth v. Stone, 1 Story, 281.)

Tested by those rules, as the case must be, it is quite clear that the defence under consideration must be overruled, as there is no evidence in the record to show that the inventions, or either of them, were in public use, or on sale, more than two years before the inventor applied for a patent, or for any shorter period, with the consent and allowance of the patentee, or that he had any knowledge of any such sale, or public use, at the time it was made. On the contrary, the evidence shows that the inventor never gave his consent to any such sales, and that he constantly asserted that he intended to apply for a patent. Sales in some cases were made by his brother, but the evidence shows that the inventor disapproved of the acts, as calculated to produce embarrassment when he presented his application for a patent to the Patent-Office. Public use of an invention, unless by the patentee himself, for profit, or by his consent and allowance, will not work a forfeiture of his

title, as such forfeiture is not favored unless it clearly appear that the use was solely for profit, and not with a view of further improvements, or of ascertaining its defects, or for any other purpose of experiment in reducing the invention to practice. (Pitts v. Hall, 2 Blatch., 236.)

342 Inventors have a right to employ all means necessary and proper to enable them to perfect their inventions, and to reduce the same to practice, and it is clear that no such experimental act can justly be viewed as legitimate evidence to support the defence of a prior unauthorized public sale or use of the invention, or a use inconsistent with the right to apply for a patent to secure the exclusive authority to make and use the invention, and to vend it to others to be used, as provided in the patent act. Persons charged with the infringement of letters-patent, may set up as a defence that the inventor suffered the invention to be in public use and on sale more than two years before he applied for a patent, and they may also set up as a distinct defence, even in the same answer, that the inventor, before he applied for a patent, abandoned the invention to the public, but those two defences ought not to be blended in the same allegation, as they depend in many respects upon very different principles. Some of the amendments to the answer, however, were filed by consent, and inasmuch as no exception was taken to this part of the answer, the question of abandonment, as pleaded, may be considered as open.

As pleaded, the defence is that the inventor abandoned the invention to the public before he filed his application for a patent. His first application was filed on the eighth of March, 1853, and he filed the second application on the eighteenth of February, 1862, which it is conceded is substantially the same as the first one, which is still on file in the Patent-Office. Evidence of an affirmative character to show that the inventor ever uttered a word or did an act signifying an intention to abandon his invention to the public before he filed his first application for a patent is entirely wanting, nor is there any circumstance introduced in evidence to support that theory, except the mere lapse of time from the discovery of the invention to the filing of the

343 application, and it is settled law that the mere forbearance to apply for a patent during the progress of experiments, and until the party has perfected his invention, and tested its value by actual practice, affords no just grounds for any such presumption. (Kendall v. Winsor, 21 How., 328; Agawam Co. v. Jordan, 7 Wall., 607.)

Apply that rule to the present case, and it is clear that the proofs furnish no ground for such a presumption before his first application was improperly rejected by the Patent-Office. Such an adverse decision operates as a great discouragement to an indigent inventor, as was strikingly illustrated in the case of the inventor of the improved mode of manufacturing wool, who, in consequence of such a decision, was kept out of the enjoyment of the fruits of his genius for forty years. (Agawam Co. v. Jordan, 7; Ibid., 604.)

Abandonment or dedication of an invention to the public, being in the nature of a forfeiture of a right, is not favored in law, and Mr. Justice Nelson decided that such a defence could not be sustained, unless the acts of the party invoked for the purpose were corroborated by some declarations manifesting such an intention; but it is not necessary to apply that rule in this case, as the evidence fails to disclose either any act or declaration to support the theory. Argument to show that the inventor was entitled to a patent at the time his first application was rejected is unnecessary, as the proposition stands confessed by the Patent-Office. Nothing beyond the decision of the office, reversing their former action, would seem to be required to establish that propo-

sition; but if more be needed, it will be found in the reasons which the office assigned at the time for refusing to issue the patent. Those reasons, it will be recollected, were, that the alleged invention
344 was substantially the same as that in common use for preserving meats and vegetable substances, which shows, beyond all doubt, that the office never gave the subject a proper examination, or utterly failed to understand the nature of the improvement, or to comprehend the mode of operation as scientifically described in the specification. Truth was crushed for the moment, but, happily for the cause of justice, the reasons given for the erroneous decision remained on file, which enabled the office, at a later period, to correct the error, and to do justice to a meritorious inventor. Construed strictly, the defence of abandonment, as pleaded, has respect only to the period of time which elapsed between the discovery of the invention and the filing of the first application, which was rejected; but the respondent insists, in argument, that the inquiry under that issue extends also to the facts and circumstances which occurred between the times when the first application was rejected and the filing of the second, which, with some hesitation, is admitted, as it is by no means certain that a second application was necessary. (Suffolk Co. v. Hayden, 3 Wall., 319; Godfrey v. Eames, 1 Wall., 325.)

Delays in the Patent-Office, which an inventor cannot prevent, will not impair his title to his invention, nor can any use of the invention during such delays, if without his consent and allowance, afford any evidence to support the issue that the inventor abandoned the invention to the public. (Howe v. Williams, 2 Cliff., 262; Stimpson v. Railroad, 4 How., 402; Goodyear v. Day, Law's Digest, 363; Morris v. Huntingdon, 1 Paine, 348.)

Suppose, however, the period between the rejection of the first
345 application and the filing of the second is as much within the issue presented by the answer as the period between the discovery of the invention and the filing of the first application, still I am of the opinion that the defence that the inventor abandoned his invention to the public is not sustained by the evidence exhibited in the record. No one but the inventor is competent to abandon his invention to the public. His acts and declarations, if explicit, are sufficient for the purpose, or he may accomplish the same end by continued acquiescence in the acts of others, of which it appears that he had knowledge; but the proof of knowledge and acquiescence must be beyond all reasonable doubt, as every presumption is the other way. (McCormick v. Seymour, 2 Blatch., 255.)

Testimony is introduced by the respondent showing that the brother of the inventor made sale of small quantities of the preserved corn, on several occasions, but the record does not contain any evidence that the inventor ever sold any of the patented product, or that he ever gave his consent that the product should be sold by his brother or any other person before he filed his application for a patent. Prior to the application for a patent, the better opinion from the evidence is that none of the product of the new process was put upon the market, as the evidence is satisfactory that he knew that sales or public use more than two years before he applied for a patent would defeat his right. Immediately upon filing his application for a patent he gave a license to his brother and the first-named complainant, and received a royalty from them for their manufacture. Small amounts only were manufactured, and few sales only were made subsequent to the rejection of the first application.

When a party practices his invention merely for the purposes of experiment or completion, before he takes out a patent, the inference that

he intends to surrender the invention to the public does not arise
346 and consequently a dedication to the public cannot be proved by evidence that shows only experimental practice, by the inventor or his employés, whether in public or private. Such an inference is never favored, nor will it in general be sufficient to prove such a defence, unless it appears that the use, exercise, or practice of the invention was somewhat extensive, and for the purpose of gain, evincing an intent on the part of the inventor to secure the exclusive benefits of his invention without applying for the protection of letters-patent. (Curtis on P., 3d ed., sec. 389.)

Exceptional cases arise, as where the invention, by acts of the inventor, has gone into general public use, and got beyond his control, without any effort on his part to restrain its general use, as in such a case it is held that he cannot resume the ownership dedicated to the public, and that his right to a patent is forfeited. Speaking of such a case, however, Judge Story said in Mellus v. Silsbee, 4 Mason, 111, that the inventor "is not to be estopped by licensing a few persons to use his invention to ascertain its utility, or by any such acts of peculiar indulgence and use as may fairly consist with the clear intention to hold the exclusive privilege." Tested by that rule, it is quite clear that the single license referred to, which was not granted until after the application for a patent was filed, and which was never exercised except to a very limited extent, is wholly insufficient to support the defence that the inventor abandoned the invention to the public. All must agree that he did not intend to dedicate it to the public, as his application for a patent was then pending in the Patent-Office, and the evidence shows that he continued to press it, with confident hopes of success, until the adverse decision was announced. Nor does the record exhibit any evidence to show that the invention got into public use, with the consent and allowance of the inventor, or through any negligence or im-
347 providence on his part, as it appears that he visited the Patent-Office as often as it was necessary, to ascertain whether the opinion of the Commissioner had undergone any change, and that he presented his second application for a patent as soon as he could obtain any hope of receiving a decision in his favor. No persons, except the two before mentioned, ever had authority from him to practice the invention, and the proofs show that all others who did practice it before the date of the letters-patent obtained their information, whether from rumor or otherwise, without the consent and allowance of the patentee.

Separate examination of the other foreign patents introduced by the respondent does not appear to be necessary, as the stress of the argument to show that the patentee in the patent of the complainant was not the original and first inventor of the improvement seem' to rest upon the Durand patent, which the principal expert of the complainant says would not succeed with green corn, and he supports that conclusion with reasons which are both persuasive and convincing. Due attention to the nature of the invention in question and to its described mode of operation is all that is necessary to render the reasons given by the witness conclusive, as it is clear that the patent in the other case does not contain a word to indicate that the patentee ever thought of removing the kernels from the cob by means of a gauged knife, for the purpose of liberating the juices of the same, so that the kernels, as packed in the cans, would be cooked in their own juices when the cans are placed in the bath of boiling water. Sweet corn, in the green state, as the witness testifies, is a peculiar substance, differing materially from any other cereal, seed-fruit or vegetable, used as food. Its composition and structure are such that it is singularly susceptible to fer-

mentative decompositions and changes, more so than any fruit or vegetable that has been successfully preserved in hermetically-
348 closed packages, for any considerable length of time. Such liability to rapid change is not due to any one particular constituent, but to the presence together of several substances, such as gluten, sugar, fat, and starch, in such proportions as are best adapted for fermentation and action upon each other. Its peculiar flavor, other than its sweetness, is contained in and associated with the fat or oil present, so that very slight fermentations of the other constituents are sufficient to destroy that peculiar aroma.

Green corn, of the kind mentioned, in common with other cereals, contains more phosphorous or phosphoric acid than fruits or other vegetables. As compared with sweet peas, for instance, the kernels of sweet corn are much more delicate and liable to change, as they contain a much larger proportion of milk, juice, or sap, which itself contains more sugar, starch, and oil than the juice of sweet peas, and the glutinous or nitrogenous constituent, which acts as the ferment or primary cause of change, is much more active in the juice of sweet corn than in that of sweet peas. Equally instructive support to the same view is derived by comparing sweet corn with such fruits as peaches, as the juice of the peach contains no oil, and the kernels of sweet corn contain only one-eighth as much water as the peach, besides other differences of an equally important character, showing that such fruits as peaches are much less liable to ferment than sweet corn and that they are much more easily packed and preserved. Examined in the light of these suggestions, as the case should be, it is quite clear that the mode of operation described in the specification of the complainant's patent differed widely from anything which preceded it, and that it effects a new and highly useful result, and for these reasons the complainants are entitled to a decree for an account and for an injunction.

349 MAINE DISTRICT, *ss:*

Circuit court United States, April term, 1873; holden by adjournment May 17, 1873.

Filed, by order of court, with the papers in the cause to which it relates.

Attest: GEO. F. EMORY, *Clerk.*

350 UNITED STATES OF AMERICA,
Maine District, ss:

OFFICE OF THE CLERK C. C. U. S.

I, Geo. F. Emory, clerk of the circuit court of the United States for Maine district, hereby certify that the foregoing is a true copy of the opinion of the court rendered in the cause therein referred to, as appears of record.

In testimony whereof I have hereunto set my hand and affixed the seal of said court this sixth day of August, A. D. 1873.

[SEAL.]

Attest: GEO. F. EMORY, *Clerk.*

(Indorsement on cover:) No. 263. Rufus K. Sewall, adm'r of Henry Clark, dec'd, appellant, *vs.* John Winslow Jones et al. Maine C. C. U. S. Filed 16th October, 1873.

O

Supreme Court of the United States.

No. 52, October Term, 1875.

R. K. SEWALL, Administrator of HENRY CLARK, deceased, Appellant,
vs.
JOHN WINSLOW JONES *et al.*

Appeal from the Circuit Court of the United States, for the District of Maine.

IN EQUITY.

Rufus K. Sewall, Administrator, appellant, *vs.* John W. Jones *et als.*, appellees. And now by leave of court, the appellant in the above entitled cause comes and before hearing thereof, says, that since the trial of said cause in the first circuit and of the District of Maine, and since this appeal was taken from judgment of the court below in said Circuit of said District, in a trial had in the Circuit Court of the U. S. for the District of New Jersey, the validity of the same patents now at issue here and in this appeal and which are the subject matter of said appeal, was put in issue in said court before their Honors Judges Nixon and McKennan of said circuit; and that certain newly discovered evidence, not before known to this appellant and not found, nor existing within said first circuit, was produced; and which said evidence appears suggested on the record of said court in the opinion thereof, and in words following, viz:

"U. S. CIRCUIT COURT, DISTRICT OF NEW JERSEY.

"WILLIAM H. CLIFFORD *et al.*
"AND
"NEHEMIAH SLEEPER *et al.* } "*In Equity.*

"By the Court:

"This is an application for a preliminary injunction, and "it is founded mainly upon the opinion of Mr. Justice Clifford, in the "first circuit, sustaining the validity of the complainants' patent.

"There are two reasons, we think, why the preliminary injunction "should be denied.

"1. In the first place, accepting the construction given to the patent "by the learned Judge, in the case referred to, it is not clear that the "defendants are infringing.

"2. In the second place, a large amount of new evidence, tending "to impeach the validity of the patent, has been introduced by the "defendants which, if true, shows quite clearly the prior use of the "invention.

"We cannot, of course, determine the value, or the weight, that "ought to be attached to evidence, which only appears by *ex parte* "affidavits. It is sufficient at this stage of the case to be able to perceive, "that if such new testimony had been fully exhibited to his Honor Mr. "Justice Clifford, it is not improbable that he would have reached a "different result, on the question of the validity of the complainants' "patent.

"We are, therefore, constrained to refuse the injunction; but, in "consequence of the decision of Mr. Justice Clifford, whose opinion, in "cases of this sort, is entitled to great weight, here and elsewhere, the "defendants are required to enter into a Bond, with good and sufficient "sureties, in the penal sum of twenty-five thousand dollars, conditioned "for the payment of such sum, if any, as may be decreed in favor of the "complainants, on the final hearing of the cause. The Bond to be filed "with the Clerk of the Court, and to be approved by the Clerk, or by a "Judge of the Court, within twenty days after notice of this order.

"The defendants also are to file with the Clerk, quarterly statements, "under oath, of the amount of their manufacture and sale, of the alleged

"infringing article, and either party may apply to the Court, upon ten "days notice to the other, for an increase or diminution of the amount "of the security required.

"A true copy.

SEAL.

"S. D. OLIPHANT,
"*Clerk.*"

Wherefore appellant prays, that if in the hearing of the appeal here now pending, on the proofs therein exhibited this Hon. Court should not deem the same sufficient to entitle this appellant to reversal of the said judgment below, that said court would be pleased to remand said cause to the said first circuit of the Maine District for such other and further proceedings, to be had in the premises, on the aforesaid newly discovered evidence as to law and justice shall appertain.

RUFUS K. SEWALL, Administrator Estate of
HENRY CLARK, deceased, Appellant, *pro se.*

N. B. This motion is submitted to the discretion of the Court, without argument, as a measure of safety and duty under the authority of this Court, as held in Southard & al. *v.* Russell, 16 Howard, 547, 571, by appellant.

SEAL.

True copy—Test:
D. W. MIDDLETON,
Clerk Sup. Court U. S.

Supreme Court of the United States.

No. 52, October Term, 1875.

R. K. SEWALL, Administrator of HENRY CLARK, deceased, Appellant,
vs.
JOHN WINSLOW JONES *et al.*

Appeal from the Circuit Court of the United States, for the District of Maine.

Brief on the part of the Appellant in No. 52.

IN EQUITY.

FACTS.

The questions raised in this cause are the validity of certain Patents, of which Appellees are owners, and not inventors, the inventor never having in them any interest beyond an incohate right. The alleged inventor was one Isaac Winslow, who from France, by letter, initiated the process of preserving green corn, and came home and reduced it to practice at Westbrook, near Portland, in Maine, in 1842. (1)

On the 8th of March, 1853, he sued for a Patent for "*a new and improved mode of preserving indian corn.*" In prosecuting his claim, he abandoned the part relating to the cutting the corn

1 Opinion of Clifford, J.—page 167.

off the cob on the 2d Nov. 1853: and on the 19th Nov. 1853, the claim was finally adjudicated, rejected, and Patent denied. Covered by this rejection, was "*the new article of manufacture—or preserved indian corn*," (1) as well as the process of preserving,—and on the 3d Aug. 1854, specifications were withdrawn from Patent Office by inventor and lost. (2)

Inventor meanwhile assigned his inchoate right to the Patentee and principal Appellee and another. "Nothing further was done by him to procure a patent until the 18th Feb. 1862, when he filed in the Patent Office a second application for a Patent," (3) claiming an "*improvement in preserving indian corn green.*" Thereupon four several Patents were issued, not to the inventor, but to one J. W. Jones, the principal appellee.

In 1867, Henry Clark of Wiscasset had established himself in the business of corn packing at Wiscasset, Maine, when suit was brought against him and judgment entered for some seven hundred cans of a package of sixteen thousand cans of green corn that year. Meanwhile Clark died; and as his Attorney of record and representative, your Appellant brought his defense to the bar of the First Circuit in the District of Maine; and by appeal, now prosecutes said defense to final issue, against judgment in the court below setting up the first two of the several Patents, viz: April 8, 1862, No. 34,928 and of May 13, 1862, No. 35,272—the others having been declared void, from which no appeal was taken by these Appellees, leaving the first two only in controversy in this issue.

JUDGMENT ERRONEOUS.

1. In not distinguishing between and strictly construing and applying the law, to the acts and rights of Patentee, in prosecution of an inchoate right, who is not the inventor.

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1 Case, page 78—See Inventor's oath, renewing application, Feb. 18, 1862.

2 See letter files of first application, Case, pages 79—82. Oath of invention, Feb. 18, 1862, Case, page 78.

3 Opinion, Clifford, Justice—page 169.

2. In construction of the grants; the non-patentability thereof appearing on the face of the record, in lack of Statute conditions. (11 *Wall, page* 540—*Seymour v. Osborne—Specific differences distinguishing from like kinds must be pointed out and are conditions precedent to right to grant, &c.*)

3. In ignoring the fraud charged by answer as affecting the prosecution of these patents; and in extending the doctrine in the case of Seymour *v.* Osborne (1) (11 *Wall.* 517—60) to these, they being neither re-issued or extended patents.

4. In neutralizing legal force and effect of the doctrine of *presumed knowledge and acquiescence*, as bearing on the question of abandonment. (2)

5. In ignoring the full legal effect of the laches and negligence both of the inventor and patentee, in prosecution of said patents and defense thereof, as working forfeiture.

6. In overriding limitations of law, in bar of said patents, for manufacture and sale of products, by inventor and patentee, for more than two years before application.

7. In the assumption of facts not set out in specifications of either patent; (3) and further that the claim for product had never been passed upon by Patent Office, before application of February 18th, 1862, in contradiction of the inventor's oath in that application. (4)

8. In upholding patentability of a product in derogation of the law of "*analagous effect*," as held in the United States and England. (5)

9. The judgment below is conceived to be against the

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1 The subject matter of that decision contemplated *re-issues*, not an original prosecution; and is founded on an opinion of this court, covering the right of an *infringer* to abrogate a *re-issued* or extended patent on account of fraud on Commissioner in the grant. 11 Wall, page 545. 9 Wall, page 788—Rubber Co. *v.* Goodyear. Appellants controvert the original application, and the question is open to them. Page 546.

2 Case, pages 175—176—Opinion.

3 Case, page 171—Opinion.

4 Case, page 169; compare page 78—Oath Feb. 18, 1862.

5 Lowell, J., Massachusetts Circuit—J. W. Jones & als. *v.* W. B. Hodges & als.

evidence and the weight of the evidence and the law, as it disregards the legal effect of pre-existing patents and published descriptions of the subject matter of the process and improvements in said patents before application therefor and issue thereof.

PATENTS VOID.

I. In lack of Statute conditions of patentability on face of the record. (1)

II. Patents in question are founded on the original application and a *suit determined* by oath of inventor; and vested in a *claim declared void;* and exist without due proceedings had and in fraud of the law. (2)

III. Inventor was not the original and first discoverer of the process applied by him to preserve green corn, but learned it in France. (3)

IV. The process was well known to the public and in public use, as a regularly organized business and trade by the firm of Treat, Noble & Co., at Eastport in Maine, and the United States, in 1841—one year before alleged invention was made and reduced to practice by Isaac Winslow, in application to green corn. (4)

V. Alleged improvement, claimed in the patented process, was an attempt to apply the "French process" so called (*or non venting hermetical sealing*) to preservation of green corn—but

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1 11 Wall—Seymour *v.* Osborne, pages 517—60. Inventors must fully explain wherein invention may be distinguished from others of like kind; must specify and point out improvement; conditions precedent to grant.

2 Case, page 78—Oath, Feb. 18, 1872. Do., page 81.

3 Case, page 27—Jones' depo., Inter. 4. Do., page 130—Lewis' depo., Inter. 5; pages 133—4. Cross Inter. 4. Case, page 121—A. Ring's depo., Inter. 11.

4 Case, page 99—U. S. Treat's depo., Inter. 2, 3, 4. 5 and Ans. Case, page 44—45—depo. Saml. Rumery (in Thompson & Totten) Inter. 22 to 32. Case, page 105—Evans' depo., Inter. 8—9. Case, page 131—Cross Inter. 27—32—Lewis' depo. Case, page 109—Inter. 3 to 10, Chas. J. Underwood's depo.

for the uncertainty and unmarketableness of the result—is impracticable and useless. (1)

VI. Venting is essential to a successful and practical manipulation of corn canning; and this device was no invention of Isaac Winslow. (2)

VII. This and the other improvements alleged, are but re-patents of the inventions of others; and no disclaimer has been made either by inventor or patentee.

VIII. The product covered by first patent is a natural effect—an analagous result—a double use of a well known device applied to the preservation of vegetable juices and fruits and other food. (3)

IX. The process claimed and covered is substantially described in specifications of Peter Durand and Henry Gunter, patented and published in the United States and England in 1810—1841—and before the application for the patents in question. (4)

X. For more than two years before his first application for a patent, the alleged inventor, Isaac Winslow, *manufactured and aided in the manufacture of canned corn, by his process, as a business and for the market, and which was actually in market and on sale by his own acts.* (5)

XI. Statute of limitations had fully intervened to cut off all right under the application of March 8th, 1853, for the

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1 Case, page 4—Schedule to first patent.

2 Durand and Gunter's specifications—Case, pages 83—85. Turner's Chemistry, page 147.

3 Leibig's Chemistry, chap. 7, page 101. Case, page 147—Exhibit D.

4 Case, pages 83—85.

5 Case, page 153—J. Ford's depo. for complainants—Cross Inter. 6, 7, 8: "In late years I knew the Eastport corn was in the market, competing with corn put up by the Winslows, that is, that the corn put up in Eastport in 1847, or earlier, was in the market at that time competing with the corn put up by the Winslows; and by the Winslows, I mean Isaac and Nathan Winslow. I know positively *they packed corn by their process for market, in* 1850."

patent claimed; and also to the product under the application of February 18th, 1862, for indian corn preserved green. (1)

XII. The use and sale of the invention before said applications, was with the knowledge and assent of the Inventor and of the Patentee. (2)

CLARK DID NOT INFRINGE.

The 700 cans of Henry Clark's package was corn preserved green by *hermetical venting;*—removed from the cob for preserving by *a straight edged knife, and not by the patent guaged knife of Winslow's invention;* and was preserved under the *published processes of ancient patented discoveries of the hermetical art—and according to methods used by Treat, Noble & Co., at Eastport, in* 1841; and is no infringement of Isaac Winslow's alleged "French process" or any device of his. (3)

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1 Hovey *v.* Hovey. Woodbury, J., Massachusetts, 1845. Law's Digest. Act, 1839, (Note A) page 91. "Section allowing use and sale of invention two years before application for a patent, is in the nature of a Statute of limitations."

2 Case, page 153—J. Ford's depo., Cross Inter. 6 to 8. Case, pages 28—39—Depo. and affidavit of J. W. Jones. Case, page 38—Cross Inter. 11, depo. J. W. Jones. Case, page 155—Inter. 6, depo. J. W. Jones. Case, page 40—"I am aware of various parties since 1852, who have attempted to pack corn by Winslow's process."—J. W. Jones' affidavit. Jones knew Ring put up corn in Portland; Case, page 34—Cross Inter. 91.

3 Case, page 118 to 123—A. Ring's depo., Cross Inter. 16 and Ans. "I and Clark cut it (*i. e. corn*) off with a straight knife. When it was cut off with the sharp edge of the knife, we tried to keep the kernels whole as we could."

RUFUS K. SEWALL, Administrator
for Estate HENRY CLARK, *pro se.*

IN THE

Supreme Court of United States.

No. 52.

RUFUS K. SEWALL, Administrator of Henry Clark, Deceased, } *Appellant,*

vs.

JOHN WINSLOW JONES, et al.,

Appellees.

Appellant's Brief on Appeal.

E. N. DICKERSON,

Counsel for Appellant.

NEW-YORK:
S. W. GREEN, PRINTER, Nos. 16 AND 18 JACOB STREET.

In the Supreme Court of the United States.

No. 52.

RUFUS K. SEWALL, Administrator of Henry Clark, deceased,

Appellant,

vs.

JOHN WINSLOW JONES *et al.*

Appellant's Brief.

STATEMENT OF THE CASE

Before 1810, M. Appert, a scientist in France, discovered the capital fact that animal or vegetable food, if hermetically sealed in vessels, and subjected to a boiling heat, would be preserved from corruption so long as the air was kept excluded. This discovery is founded upon the fact, which had been previously discovered by Redi, that putrefaction depends upon, and results from, the growth of low organisms, either animal or vegetable, the germs of which abound in nature generally, and develop into activity after the body in which they are found has ceased to perform vital functions. Appert's process proceeded upon the theory, now well established, that heat kills the germs

which are already in the substance operated upon, and that the exclusion of air prevents any other germs from finding their way into contact with the substance.

This great discovery of Appert was rewarded by the French Emperor, Napoleon, with a gift of money; and it laid the foundation of a new branch of industry, which has developed in France, and all over the world, to its present immense proportions, and under which all sorts of perishable food are preserved for indefinite periods, and made capable of transportation to the ends of the earth.

In 1810 this invention was patented in England, as a communication from a "foreigner residing abroad;" and it appears in this record under the title of Durand's specification (p. 82). This specification describes the art, and how to reduce it to practice, with great precision. The first instruction given is in these words:

"I place and inclose the said food or articles in bottles "or other vessels of glass, pottery, tin, or other metals or "fit materials; and I do close the aperture of such con- "taining-vessels, so as completely to cut off and exclude all "communication with the external air" (p. 83).

The second instruction is to place these hermetrically-sealed vessels in a boiler, and to subject them to boiling "for a certain time, which must depend upon the nature "of the substances included in the vessels, and the size of "the said vessels, and from obvious circumstances which "would be easily apprehended by the operator without "further instruction." In describing the preparation of the articles of food which are to be subjected to this treatment, the patent says: "*Vegetable* substances are to be put into the "vessel in the *raw or crude state*, and animal substances "partly or half cooked, although these may be put in raw" (fol. 168). The patent then suggests that an oven or a steam-bath may be used for heating; and it then proceeds to describe what is now called "venting" in these words:

"As the choice of the consumer or the nature of the said "food or other article may render preferable, leave the "aperture of the vessel, or a small portion thereof, open

"until the effect of the heat shall have taken place, at "which period I close the same" (fol. 168).

Other patents were subsequently taken by other inventors for useful devices in practicing Appert's invention. In 1841, Henry Gunter took a patent for puncturing or venting the cans *after the cooking* had been performed; which was done by removing the cans from the boiler, and placing them in a sand-bath where the boiling temperature was maintained, and in that situation puncturing the cans, allowing some steam to escape, and then soldering or sealing the aperture while the can was yet in the boiling condition. (Fol. 171).

In 1841, Wertheimer patented a special device for puncturing and soldering the cans. He also patented, as a process, puncturing and soldering the cans after the operation of heat had been partially performed, and "continuing the "heat after closing for a time, in order to decompose the "remaining atmospheric air" (fol. 156). He also specifies that the "meat or vegetables may be put into the "case in their natural state, or they may be first scalded" (fol. 153).

It thus appears that as early as 1810 the whole process of preserving animal and vegetable substances, by inclosing them in hermetically-sealed cans, and subjecting them to a boiling temperature, and either puncturing the cans to permit the escape of the air, or keeping the cans hermetically sealed during the whole process, was well known in the world, and patented in England; and that as early as 1841 there were patented the minute details of the process, in which the food was partially cooked in sealed cans, the cans then punctured to permit the escape of air, and then sealed, and again subjected to cooking.

These patents cover every thing, to the fullest extent, which is now known upon the subject. There has been no addition or improvement since their date.

ISAAC WINSLOW.

In 1842, Isaac Winslow, being at that time in France, where this art of packing food had been carried on to a

great extent, wrote to his relative, Caleb Jones, at Westbrook, near Portland, in Maine, "to plant a piece of ground with sweet corn," which was done (fol. 61).

In the fall, Isaac Winslow returned to Westbrook, and packed that corn in cans, exactly according to the Appert process. The story of Winslow's proceedings is told by the complainant in this case, John Winslow Jones, who speaks from his own personal knowledge of it, and it is this:

Isaac Winslow having packed the corn in 1842, returned in 1843, and "made more extended preparations for it, "put in steam tanks for cooking the corn, instead of put-"ting it into water by direct steam." (This use of steam was suggested in the Durand patent of 1810.) Winslow found that steam was not as good as hot water, and in 1844 he returned to the water-bath. From that time, until 1849, Isaac Winslow came each year to Westbrook to pack corn according to this Appert process (fol. 62.) In 1848 or 1849, the manufacture was transferred from the place where they first started it to a place called Congin, where it was continued until 1852, at least (fol. 70, Q. 58 to 66). Jones proves—and he took great pains to prove—that Winslow "was established in the principle of packing corn" from the beginning (Q. 5, fol. 63); and that his "*experiments*" were confined to the mechanical part, which he explains fully to mean that the difficulty which was encountered was in *getting tin cans well made.* This explanation Jones gives in his direct examination (fol. 76, Q. 3 and 4); and at fol. 78, Q. 11, he insists that Winslow tried no experiments; and also at folio 81, Direct Q. 1, that Winslow tried no experiments on the process, but only on the mechanical problem of making good tight cans.

This manufacture by Isaac Winslow was carried on to such an extent as that it became well known in the trade. Jones leaves no doubt about that, but says: "I intended "to apply it to the years from 1842 to 1849; and I mean "that he had *one method of packing corn all those years*

"*to such an extent that it was known in the trade as Win-*
"*slow's method*" (fol. 79, Q. 30).

Jones himself went into the business in 1850, and has been in it ever since (Q. 11, fol. 64). He says he went into it when he was 22 years old. He was 43 years old when he was examined, which was January, 1871, so that he was 22 years old in 1850, when he commenced the corn-packing business, and has continued in it ever since. Nathan Winslow, the brother of Isaac Winslow, joined Isaac in 1846, and he continued the packing "under Isaac's superintendence" (fol. 80, Q. 6). Nathan and Isaac carried on this business regularly from 1842 to 1849, and Nathan furnished the money (fol. 79, Q. 17 and 18.)

In 1849, Jones tells us that other parties were packing this corn in Portland—Kemp, Day & Co. (fol. 81, Q. 11).

In 1848 this "Winslow corn" was in the market of New-York and Boston as a regular article of merchandise. Samuel S. Pierce, a merchant of Boston, produces Nathan Winslow's bill, February 19th, 1848, for corn sold him in that year (fol. 253). This corn was labelled, "Prepared Sweet Corn. By Nathan Winslow, Portland, Maine" (fol. 250), and was sold by that merchant, in increasing quantities, from 1848 continuously, "in 1849 about 50 doz., about the same in 1850; in 1851 about a hundred doz., and so on (fol. 252).

This witness was called by the defendant; but the plaintiff, Jones, called a witness, Ford, who testified as follows:

"Int. 6. Can you testify that the corn put up by you at Eastport was competing with the corn put up by Nathan and Isaac Winslow by the Winslow process, at that time, or as late as 1847?

"Ans. In late years I knew that it was in the market, and that it was competing with the corn put up by the Winslows—that is, that the corn put up at Eastport in 1847, or earlier, was in the market at that time competing with the corn put up by the Winslows.

"Int. 7. By the Winslows you mean Isaac and Nathan Winslow?

"Ans. Yes.

"Int. 8. From your knowledge now, how early did the Winslows pack corn by their process for the market?

"Ans. *I know positively that they did so in* 1850."

(P. 153, Ints. 6, 7 and 8.)

This witness proves, of his own knowledge, that Isaac and Nathan Winslow jointly were selling this corn in 1850; and that he knows, by evidence satisfactory to him, that they were doing it in 1847 or earlier.

Stephen H. Provost, of New-York, began to sell this Winslow corn for Nathan Winslow, in New-York, in 1848 or 1849 (fol. 184).

Upham S. Treat commenced canning corn, at Eastport, in 1842 or 1843 (fol. 199, Q. 11). He examined the market, from Eastport to Alexandria, in those years, and found no corn in it. This same person began at Treat's Island in 1848. From that time until 1856, every year he put quantities into the market (fol. 200). This corn was packed raw with its own juices (fol. 201, Q. 15). Treat's practice was derived from Charles Mitchell (fol. 186), who had learned the Appert process in Aberdeen, Scotland, in 1831, under John Moir & Son, who were engaged in that business there at that time. Mitchell came to this country in 1842, and went into the business of hermetically preserved goods immediately. This witness produces a bill, Exhibit A (fol. 197), containing an inventory of his stock in 1846, in which this preserved green corn is found, and in which he states his years of experience in Europe and in this country.

Underwood was another manufacturer of canned goods, who began in 1846 or 1847, and packed corn in Boston, or Charlestown, in Massachusetts (fol. 207, Q. 6). In 1849, and probably in 1848, the house of Underwood & Co. packed their corn in the green state (fol. 222, Q. 12). This witness did the operation himself, and has the best means of fixing circumstance and dates.

Rummery, a witness of the complainant, and a part owner of the patent, and partner of Jones, went into the manufacture with Nathan Winslow in 1848 (fol. 88, Q. 5,

fol. 89, Q. 9); so that he knew of its public manufacture at least as early as 1848. This witness had heard "of a man who was *putting up corn in Portland by a new process*," when he was in Eastport, which was in 1843-44, (Q. 6 and 9). This man was Isaac Winslow, who was "putting up corn" in Portland, the reputation of which had gone to Eastport; and this agrees with Jones's story that this manufacture from 1842 to 1849 "was *known in the trade* as Winslow's Method" (fol. 79, Int. 30).

JONES'S PATENTS.

Under the circumstances, thus proved by the complainant himself, Isaac Winslow, on the 8th day of March, 1853, more than five years after this preserved corn was notoriously on the market, with labels indicating its manufacture and origin—applied to the Patent Office for a patent of some kind. What that application was, we have no means of knowing; because all the important papers have disappeared from the Patent Office. But the correspondence in relation to the application, which does remain, and which is in this record on pages 80 and 81, shows that the application contained *two distinct subjects matter;* one of which was a "process" of some kind, and the other a machine for removing the kernels from the cobs preparatory to their treatment, which machine required drawings and a model, and to illustrate which "drawings and a model" were deposited in the Patent Office October 26, 1853, as appears by Winslow's letter of that date (fol. 162). The office then decided that the process, whatever it was, which was described in the application, and the machine which was illustrated by the model and drawings, could not both be included in a single patent; and thereupon Winslow withdrew so much of his application as covered the machine, and amended his specification, confining it to the process, whatever it was. This application was rejected by a letter of November 19, 1853 (fol. 164), by reference to McKenzie's five thousand receipts, and it is apparent from the letter of rejection that "venting" was in some way a part of the process which Winslow applied for, be-

cause the office gave him a reference to anticipate that part of the process.

It is probable, in view of all the facts in the case, that Isaac Winslow's application was based upon some peculiar way of treating the cans, and of *venting* them, which the office disposed of, as the letter shows. It is not probable that Isaac Winslow, at that time, applied for a patent for Appert's process, pure and simple; and the evidence on record excludes that idea. Winslow may have honestly supposed himself the inventor of some way of using the "*vent*," and entitled to a patent for it; but it seems impossible that he could have supposed himself the inventor of the Appert process, or that he was entitled to a patent for that process, as applied to sweet corn, after what had happened in regard to its public use for at least ten years before his application. The testimony shows that Isaac Winslow did not use the vent during the early years of his manufacture; and it may well enough be that, before 1853, he conceived of some particular use of this *vent*, and made it the subject of his application.

Isaac Winslow having been rejected by the Patent-Office, the whole matter rested for nine years; during which time Nathan Winslow continued the business, which he had been doing since 1846, until the time of his death, and John W. Jones, the complainant, continued the business, which he began in 1850, until the present time.

In 1862, Isaac Winslow assigned to John W. Jones all his right, and Jones applied for the patents which are the subject of this suit. The first of these patents was granted *under the application of* 1853, and as a conclusion of that application. (See Record, pp. 81, 82.) Its date is Ap. 8, 1862, No. 34,928.

Jones, however, was not content with obtaining that patent, but he made three other applications, and got three other independent patents; the first of which was dated May 13th, 1862 (fol. 10); the second dated May 20th, 1862 (fol. 13); and the third dated August 26th, 1862 (fol. 17). Neither of these last three patents was connected with the application of 1853, and they are all distinct and

independent, standing upon their own dates, and all in the year 1862.

The first patent, No. 34,928, describes the *entire process*, and contains every thing that is contained in all of the three succeeding ones; that is, it contains a description of green corn cut from the cob, placed in hermetically-sealed cans, and subjected to boiling heat for about four hours. It then points out that if the cans are not punctured their heads will be bulged out, but that if they are punctured their heads will be compressed by the atmosphere. It recommends puncturing the cans while hot, and continuing the heat afterward; which is the method covered by the Werthier patent of 1841; but it does not *claim* either puncturing, or treating without puncturing, as the subject of invention. It sums up the invention in these words:

"Other modes of treatment may be adopted without de-
"parting from my invention, so long as the hermetical
"sealing and use of the heat are so managed as to secure
"the aroma and fresh flavor, and prevent putrefaction,
"thus producing the new article of manufacture substan-
"tially described.

"Having thus fully described my invention, what I claim
"and desire to secure by letters patent from the United
"States is, the above described new article of manufacture,
"namely, Indian corn, when preserved in the green state,
"without drying the same, the kernels being removed from
"the cob, hermetically sealed and heated, substantially in
"the manner and for the purpose set forth." (Record, p. 4, fol. 8.)

The thing patented in this patent is "*Indian corn when preserved in the green state*," the kernels having been removed from the cob before they are treated. The inventor describes "removing the kernels from the cob by means of a *curved and gauged knife, or other suitable means.*" What a curved and gauged knife is, he does not describe, and it may be assumed that it needs no description; but it is obvious that the inventor had no other object than to "*remove*" the kernels from the cob by whatever means that could be done,

and that his patent would be infringed by removing the kernels *whole*, as well as by removing them in a broken condition. There is nothing in the patent which indicates that there is any consequence depending upon the manner in which the kernels are removed.

The patent of May 13th, No. 35,274, describes the same process as the patent No. 34,928 describes; but in this patent no mention is made of the use of any knife, but only of "*removing* the corn from the cob," leaving it to the operator to use any of the well-known means by which that could be done. This patent ends with a claim of the "process," and it prolongs the monopoly which was created under the first patent beyond the term of the first patent.

The third patent, No. 35,346, again describes the same process as the first and second patents described, but it includes *corn on the cob*. It says: "It is obvious that the "method of hermetically sealing green corn in cans, and "previous to boiling, is applicable to *ears of corn*, though "I do not recommend that process" (fol. 15). This patent claims substantially what the second one claimed—that is, the process of hermetically sealing Indian corn, and subjecting it to heat; but in this patent the claim extends to *ears* of corn as well as to kernels of corn.

The last patent, No. 36,326, contains substantially the same description as the other three, and ends with a claim of puncturing cans at some time between the commencement and end of the heating, which is exactly the claim of Werthier's patent, and which is described in all of the three preceding patents. This patent also prolonged the monopoly given by the first one for some months.

Upon these four patents the complainant brought this suit, and the Circuit Court sustained the first two—that is, No. 34,928 and No. 35,274—as valid.

ERRORS.

First. The court erred in holding that the second patent, No. 35,274, was valid, for two reasons: *First.* It is invalid for the same reason that the other two patents, No. 35,346 and 36,326, are invalid, and for which reason the court decided them to be invalid, namely, that all that it contains is contained in the original patent, No. 34,928, and its claim, if it were written into the original patent, would be sustained by its description. This patent is not, under the statute, a division by re-issue of an original patent, but is an independent subsequent patent, having a different date of commencement and termination, and it prolongs the term of the original patent by claiming, under the form of a process, that which is claimed under the form of a product in the original patent. The law as stated by his Honor (fol. 326) is this: "More than one patent for the "same invention can not be legally issued by the commis- "sioner, but the irregular issuing of a second patent can "not impair the right of the patentee under the first pa- "tent, if it was valid at the time it was granted."

In this case the process and the product are necessarily inseparable from each other. When the process is described the product is described; and the product can not be described without describing the process. The two things are correlated, and they are just like the process and the product in the vulcanized rubber patent, in which the product could only be described by describing the process. The first patent protects the patentee against any use by an infringer of the process, because the process can not be carried on without producing the product, and the product is patented; and so the second patent protects the patentee against any manufacture of the product, because the product can not be made without pursuing the process. It therefore follows that these two patents together prolong the monopoly beyond seventeen years; and obviously, if two such patents could coexist, of different dates, the term might be prolonged several years.

The authority cited in the decision, namely, Goodyear *vs.* The Providence Rubber Company, 2 Cliff., 371, is not in point. In that case, Mr. Goodyear, in an original patent, had described his process and product, but had patented only his process. He then surrendered and reissued it, in two parts, under the fifth section of the act of March 3d, 1837; and this reissue in two parts was objected to Judge Clifford decided, correctly, that under the Act of 1837, this patent was divisible into two parts by reissue; and the reason given was that "A new product or manu-"facture, and a new process or method of producing a "new article, are the proper subjects of separate and dis-"tinct claims in an original patent;" and the inference necessarily followed, that the original patent might be split into two, each one containing one of the two possible claims that might have been introduced into the original. But it does not follow that Mr. Goodyear might have patented vulcanized rubber at one time, in a patent describing the process by which it was produced, and subsequently, under the same description, have taken another patent for the process of producing the product which had been the subject of the former patent; which would be the consequence of the decision in this case applied to Goodyear's case. If so Goodyear, instead of reissuing his original process patent, might have taken a new patent for the product of the process, two years later, and so prolonged his monopoly—which can not be lawful.

This second patent is void, also, for another reason; which is that the process therein described was in public use for at least twenty years before the application for that patent in 1862; and there is no pretence that it was in use without the consent and allowance of the inventor and of the patentee. In fact, it was in use by the patentee himself at least twelve years before the patent was applied for. Whatever may be true in respect to the patent No. 34,928, the date of whose application is 1853, there is no question but that this patent, the date of whose application is 1862, is, under the evidence in this case, void.

The court also erred in deciding that in the proceedings

in the Patent Office, in 1853, Winslow being "obliged to "waive one for a time, struck out the second claim which "covered *the process for removing the corn from the cob*," and that "before the rejection took place *the claim for the* "*product had been stricken out*, so that the claim for that "part of the invention had never been the subject of de- "cision by the Patent Office" (fol. 332). The only evidence before the court on the subject is the correspondence on pp. 80 and 81; from which it appears that the two subjects of the application were *first*, some kind of *machine* for cutting off the kernels, which required drawings and a model, and *secondly*, some kind of process; and that when Winslow was required to elect, he withdrew that part of the application which required the model and drawings, and pursued that part which related to the *process*.

The letter of rejection (fol. 164) is conclusive on that subject. This is its language: "Your application for Let- "ters Patent for preserving green corn has been duly exam- "ined, and this office is of the opinion that your *process is* "*substantially the same as that in common use* for preserv- "ing both vegetable substances and animal. You are refer- "red to McKenzie's Five Thousand Receipts—Philadelphia "Edition, p. 394. If you regard the '*vent*' of special mo- "ment, you may be informed that this is a common resort," etc. Winslow never applied in 1853, to the Patent Office, for the *product* called "*Indian corn when preserved in the green state;*" but he applied for some kind of a *process*, the record of which has been withdrawn from the office and has perished. He was rejected upon that process. What he did withdraw from the office was the application for the *machine* for cutting off the kernels.

SECONDLY.

The Court erred in the construction of these two patents, or either of them. The true construction of the patents determined the question whether they were anticipated or not by the Appert process, as exhibited in the Durand patent; and the case turned upon such a construction as discriminated the Jones patents from the

Durand patent. This construction is found at folio 336 and is as follows: "Next, the respondent insists that the "process described in the English patent to Peter Durand "supersedes the invention of the assignor of the complain- "ant, as a prior discovery and for the same improvement. "Vegetable substances intended to be subjected to that pro- "cess, the specification states, are to be put into the vessels "selected for the purpose, in the 'raw or crude state;' but "the patentee, in enumerating the articles to be preserved, "*does not mention green corn*, nor does he state whether "the kernels are or are not *to be removed from the cob*, or, "if to be removed, whether the removal is to be effected in "a manner to leave the kernels unbroken, or by means of "a gauged knife, as in the mode of operation described in "the complainant's patent, nor is any mention made of "preserving green corn, or any other vegetable substance "in the natural juices of the articles, as in the mode of "operation set forth in the patent mentioned in the bill of "complaint. Instead of packing the kernels in the vessels "selected for the purpose in their *crude state*, as suggested "in the English patent, the process patented by the as- "signor of the complainant directs that the kernels should "*be cut from the cob in a way which leaves a large part of* "*the hull on the cob, and breaks open the kernels, liberating* "*the juices, to use the language of the patentee, and causing* "*the milk and other juices of the corn to flow out and sur-* "*round the kernels, as they are packed in the cans*, in such "a mode that the juices form the liquid in which the "whole is cooked, when the cans are subjected to the bath "of boiling water."

This decision involves both the construction of the Durand patent, and the construction of the Jones patent, and therefore both must be considered. In the Durand patent it is directed that the "vegetable substances" are to be "put into the vessel in the *raw or crude state, and animal* "*substances partly or half cooked*, although these may also "be put in raw" (fol. 168).

We submit that the true and only construction of this language is that the vegetables are to be put into the vessel

uncooked, and that the "*raw or crude state*," which is contradistinguished from the half-cooked state, cannot mean any thing, but that the vegetable substance is not to be in any degree cooked. But the Court construed this Durand patent as not to include corn *when cut from the cob*, because in that condition the corn is not in its "*crude state as suggested in the English patent.*" It is certainly in its "*raw*" state as distinguished from cooked; and raw or crude are simply synonymous terms.

Webster's definition of "crude" is "bloody,"—"in its natural state;"—"not cooked or prepared by fire or heat;" so that the two terms of Durand's patent are as well chosen as possible to convey the meaning.

If this construction of the Durand patent be correct, then, inasmuch as that patent "*does not mention*" any variety of vegetable food at all, a good patent might be taken for canning peas, after first removing them from the pods by the finger-nail "or other suitable means;" and the argument would be equally strong that peas, shelled out of the pod, were not in their "crude state." So patents might be taken for every kind of vegetables which are subjected to some preparatory treatment—such as peeling them, cutting them into slices, or shelling them out of their pods; and Mr. Appert might have been at once patented out of his invention, by any number of patents, each one selecting some particular vegetable, and describing the ordinary process of *preparing* it for cooking, which Appert, in his patent, did not describe.

We therefore submit that the Durand patent gave to the public the right to use the process therein described for all kinds of vegetable and animal substances; and that no man could, subsequently, deprive the public of that right, by selecting some one variety of animal or vegetable matter, and, without performing any process upon it which was not well known before, and then patenting the application of the Appert process to it.

The construction of the Jones patent is, we submit equally erroneous. That patent does not direct that "kernels should be cut from the cob in a way which leaves a

"large part of the hull on the cob, and breaks open the "kernels, liberating the juices." On the contrary, not a word is said in the patents on that subject; but the operator is directed in the patent No. 34,925, "*to remove the* "*kernels* from the cob by means of a curved and gauged "knife or *other suitable means;*" and in the patent 35,346, he is simply directed to "*remove the kernels*" from the cob, but no means whatever are pointed out for doing it. If a gauged knife is used, it is no doubt a knife gauged to a certain depth, so as not to cut into the soft cob, but yet to cut off the entire kernel and save it all; but whether that is the object or not, the patent gives no information on the subject, and the process is not made to depend upon the question of how deep the gauged knife cuts under the kernels. The court, however, ruled that if the kernels were "*removed from the cob without cutting*, that process is sub- "stantially different from complainant's process" (fol. 338); so that the question of infringement of that patent, under the construction placed upon it by the court, is made to depend upon the fact that kernels of corn, in place of being "removed" from the cob without cutting them, are "cut from the cob in a way which leaves a *large part of the hull on the cob and breaks open the kernels.*" The Court must have been misled by supposing that some language submitted by counsel in a brief as the substance of the patent, was the language of the patent itself; because the decision assumes that it is "*the language of the patentee*" that the kernels should be cut so as to break them open, "causing the milk and other juices of corn to flow out "and surround the kernels as they are packed in the cans."

The whole idea of the patent is that the kernels of corn shall be "*removed*" from the cob by "*any suitable means*," and when removed shall be packed in hermetically sealed cans, and subjected to heat. So far as the preservation of the juices of the corn is concerned, that follows as a consequence, which could not be prevented, unless the operator should put the corn into a press and squeeze out the water before he filled it into the cans; and whether the kernels were cut in two, or put into the cans whole, the

water would necessarily be the fluid in which they were cooked. The moment the corn was heated, the water would burst the delicate pellicle of the grain, and exude. Green corn itself is composed of about seventy-three per cent of water, about two per cent of oil, and about twenty-five per cent of solid matter (fol. 282); and it is more probable that the water would be lost by cutting the kernels before they were put into the can, than if the grains were removed entire.

The Court was obviously misled by relying upon the testimony of S. Dana Hayes, who, at folio 125, swore that "one hundred parts of green sweet corn kernels contained" about nine per cent of water, and about ninety per cent of solid matter. This witness pretends to give an accurate analysis of *green* sweet corn, with all the elements in decimals; and, at folio 128, he swore (Ans. 160), "I have ana-"lyzed corn preserved by these processes. That of Wins-"low is very nearly the composition of fresh green corn, "the analysis corresponding closely to that given in my "answer to the 7th interrogatory. It contains all the con-"stituents of fresh green corn in about the average propor-"tions." The answer to interrogatory 7 is the one which contains the analysis, and which shows only about nine per cent of water. Upon this testimony the Court founded an argument in support of the supposed invention disclosed in the Jones patents. The opinion says:

"Equally instructive support to the same view is derived "by comparing sweet corn with such fruits as peaches, as "the juice of the peach contains no oil, and the kernels of "sweet corn contain *only one eighth as much water as the* "*peach*, besides other differences of an equally important "character, showing that such fruits as peaches are much "*less liable to ferment* than sweet corn, and that they are "much more easily packed and preserved."

(Record, p. 177, fol. 348.)

The record, however, shows that S. Dana Hayes took his analysis of "*green* corn" out of some book which happened to give the analysis of *ripe corn*. Not having made any

analysis himself, and not having observed that the analysis of the book was that of "ripe corn" and not of green corn, he swore that fresh green corn contained about nine per cent of water. Professor Sharples gives the true analysis, which he performed upon green corn taken from the market, and corn in the cans, and he shows that green corn contained *seventy-two* per cent of water, and that the analysis sworn to by Hayes was taken out of Watts' Chemical Dictionary, and is the analysis of ripe corn (see fol. 282, Q. 4; fol. 285, Q. 10). Dry bones, corn-meal, wheat-flour, lamp-black—all contain as much as ten per cent of water; and dry Indian corn, out of which Indian-meal is made, contains about that amount. The argument, therefore, in support of the invention, founded upon this supposed peculiarity of green corn, falls, unless this Court should decide that S. Dana Hayes swore to the truth, and that Professor Sharples, and the books, are at fault in respect to the quantity of water in green corn.

THIRD ERROR.

The Court also erred in deciding that this product and process had not "been in public use or on sale with the "consent and *allowance* of the patentee for more than two "years before the application for a patent was filed in the "Patent Office." The 15th Section of the Act of 1836, modified by the 7th Section of the Act of 1839, gives the law of this case. Two distinct acts are specified in the statute which will invalidate a patent—viz., "*public use*" for more that two years before the application; and "*sale*" for more than two years before the application—either one being with the consent and *allowance* of the patentee. In this case the testimony of the complainant was all addressed to the point of "*sale*, with the consent and allowance of the "patentee." The kind of testimony which was adduced and relied upon was that Isaac Winslow, the inventor, had been heard to say that he objected to a *sale* of the corn, which was manufactured, first by himself, and afterward by Nathan Winslow, during the eleven years which elapsed between 1842 and 1853—the date of the first application. No testi-

mony was adduced to show that he objected to the "*public use*" of his invention by Nathan Winslow, who was carrying on the business of manufacturing according to the process for several years before 1853; nor is it denied that Isaac Winslow knew that Nathan was thus using this invention in public—*so public* that the corn preserved by it was on sale in the markets of Boston and New-York as early as 1848 with the label of "Winslow's Preserved Corn" upon it. It is admitted, and proved by the complainant in this case, that the invention itself was perfect in 1842, and that all the difficulty which ever existed in practicing it was in procuring from the tinsmiths sound and strong cans—some of which were then, and some of which *now* are defective. In those days when the demand for any canned goods was small, the art of manufacturing first-rate cans by machinery had not been introduced, and hand-made cans were liable to be leaky or defective; but that was the only trouble that ever existed in practicing this invention, from the beginning.

The opinion of the Court thus states: "Sales, in some "cases, were made by his brother (Nathan), but the "evidence shows *that the inventor disapproved of the "acts as calculated to produce embarrassments when he "presented his application for a patent to the Patent "Office.*" The case is thus presented of a manufacture and sale by Nathan Winslow, for more than five years before 1853, who was competing in the market with other manufacturers under the same process; during all which time Isaac Winslow stood by and saw Nathan carrying on this manufacture, and never made any attempt to obtain a patent.

Now Nathan Winslow was either Isaac Winslow's partner or he was a stranger. Either horn of the dilemma is equally fatal. If Nathan was his partner, then the acts of Nathan were his acts. If Nathan was a stranger, then Isaac stood by and saw a stranger using his invention for at least five years next before 1853, and never took any measures to protect himself. The evidence is that it was eight or nine years; but we have a bill of corn sold by

Nathan in February, 1848, which of necessity must have been manufactured as early as 1847, which was *six* years before the application of 1853.

It is submitted, therefore, that it cannot be said that this invention, if it were one, was not in *public use* more than two years before the application, with the consent and *allowance* of the inventor. If Isaac Winslow objected to Nathan's selling what he manufactured, which is incredible (because Nathan furnished the capital, and there is no pretence that Nathan carried on the manufacture as an experiment, or that it was an experiment, in 1848, at all), that does not help the case. An inventor cannot stand by and see his invention go into public use, and preserve his right to a patent by saying that he objects. If he could, then he may continue to say he objects for any number of years. Winslow must have objected for about *ten* years, according to the testimony of Whittier; but, obviously, if he could object ten years, he might object twenty; and if he could preserve his right by objecting, then there is no time within which an inventor must make an application for a patent, so long as he says in the presence of a witness that he objects to the "public use."

This Court in the case of *Shaw vs. Cooper*, 7 Peters, 320, defined what amounts to an acquiescence on the part of an inventor, in these terms: "The acquiescence of an in-
"ventor in the public use of his invention can in no case
"be presumed where he has *no knowledge of such use.*
"*But this knowledge may be presumed from the circum-*
"*stances of the case.* This will in general be a fact for the
"jury. And if the inventor do not *immediately after this*
"*notice* assert his right, it is such evidence of acquiescence
"in the public use as forever afterward to prevent him
"from asserting it.

* * * * * * *

"Whatever may be the *intention of the inventor*, if he
"suffers his invention to go into public use, through any
"means whatsoever, without an *immediate assertion of his*

"*right*, he is not entitled to a patent; nor will a patent, "obtained under such circumstances, protect his right."

That decision covers the case as if made for it. No presumption is needed to prove Isaac Winslow's knowledge of the "*public use*" of his invention. That is proved on all sides; and he not only did not "*immediately*" apply for a patent for his supposed invention, but he did not so apply for *several years*—not less than *six* at least—and then applied for a machine of some sort, and for a process which required a "*vent*" as a part of it, and not for the "*product*" which Jones afterwards patented, nor for the pure and simple Appert process which Jones still later patented.

The history of that clause of the law which gives an inventor the right to a patent, notwithstanding his invention may have gone into public use without his consent and allowance, is this: Under English law, any public knowledge of an invention, anterior to the date of the patent, deprived the patentee of the benefit of his patent; and therefore a great hardship might be worked upon an inventor, who could not help, sometimes, showing his invention in public. The philosophy of the English law, however, is to be found in the circumstance that the *inventor* was not recognized at all as the person entitled to protection; and patents were given, not because an *inventor* applied for them, but because the inventions were introduced into the country by any one. Under those circumstances, if the public had a knowledge of the invention before a patent was taken, the patent was held to be void; because the public already had that which was subsequently patented, and there was nothing earned by the patentee who was not the first introducer of the invention to the public, and who was not supposed to be its inventor. Under the American system, however, where the right of property in an invention is recognized by the constitution, and where no one but an inventor is entitled to a patent, the law was made differently; and this Court held, upon broad principles of equity and justice, that an inventor was entitled to patent his invention when he got it perfected, even though some person had surrepti-

tiously obtained a knowledge of it and put it into public use. But the Court held that the inventor must be diligent in obtaining his patent, and that he must protect himself immediately when he saw his invention in public use; otherwise he would be held to acquiesce in that public use, and would lose his rights.

The case of Shaw *vs.* Cooper laid down the law upon its true foundations; and all the cases which have been decided since that time have adopted that principle. The difficulty, however, of applying that principle might obviously be very great in some instances, and therefore the act of 1839 was passed, which gave the inventor two years, before his application for a patent was made, during which time he might, with impunity, publicly use and sell his invention. This period of two years was supposed to be sufficient; and it was, no doubt, the intention of the Legislature, that any public use, anterior to those two years, would work a forfeiture of the right, whether the inventor consented or not—but the act was defective, and so failed. The act of 1870 has fixed the law, as the act of 1859 undoubtedly intended it to have been. Thus, notwithstanding the act of 1839, the courts have held that a "public use" of the invention, more than two years before the application, would not vitiate the patent, unless such public use was with the consent and allowance of the patentee; but the principle in Shaw *vs.* Cooper has been always applied to such cases—and all the more rigorously because the inventor had two years provided for him by the statute within which to put his invention into public use, if he pleased, without losing his rights.

The cases cited in the decision of this case do not give any assistance to the patentee here. The case of Ryan *vs.* Goodwin (1 Sum., 518) was a case in which, as the Judge states it, "no use or sale is shown with the knowledge "and consent of the inventor until after he had made an "application for a patent." In that case, the whole matter occurred between the 15th of February and the month of October, 1836; and the ground upon which the case was decided was all covered by those few months. That case

occurred before the act of 1839, and two years had not then been given to the inventor for the use and sale of his invention.

The case of Wyeth *vs.* Stone (1 Story, 281) occurred in 1840, when the inventor had two years within which to use and sell his invention. The subject of that patent was an ice-cutter. The machine was made in December, 1827, and patented in March, 1829, or one year and three months afterwards. The original machine which Wyeth had made, and which he improved before December, 1827, was made in January, 1826; so that there were only two years and two months between the construction of the experimental machine and the date of the patent. During this period Wyeth was experimenting with his machine in cutting ice, and he allowed only "a temporary use thereof by a "few persons as an act of personal accommodation, or "neighborly kindness" (p. 281). It is plain that this case was protected by the two years' clause of the act of 1839; and that even if it were not, it was a case where the inventor, having made only one machine, was experimenting with it to ascertain its value before applying for a patent for a very short time, and that the public use was his use of his one machine.

The case of McCormick *vs.* Seymour (2 Blatch. 255) does not touch this question at all. That case was decided in 1851; and the point there raised was that the sale, by the inventor, *within two years* before his application for the patent, amounted to "an abandonment of the invention to the public;" and the decision of Judge Nelson, which is cited in the opinion in this case, passed upon that question, and no other. The Judge says: "Something more must "be done *within the two years*—there must be some acts of "the inventor, indicating an intention on his part to de- "vote his improvement to the public in general, in order "to authorize the jury to come to the conclusion that he "has so abandoned it. It is for them to say whether the "acts of the plaintiff *within the two years* satisfy them "that it was his design and intention to devote the invention "to the public at large, as a gratuity, and without receiving

"a consideration for its bestowal." There were no acts done in that case before the two years; but, notwithstanding the protection of the act of 1839, it was contended that sales made *within the two year* period defeat the patent, and that was the whole point in controversy.

The case of Mellus *vs.* Silsbee (4 Mason, 111) occurred in 1825, and before the act of 1836 or 1839. That case was decided under the act of 1793, and it was submitted to the jury as a question of fact, whether the inventor had dedicated his invention to the public. The Judge, however, laid down this law: "But if the "inventor proclaims his invention to all the world, and "suffers it to go into general and public use, without ob- "jection; if he *asserts no exclusive right for years*, with a "full knowledge that the public are led by it to a general "use, such conduct, in my judgment, amounts to strong "proof that he waives the exclusive right, and dedicates "the invention to the world. After such conduct, the at- "tempt to regain the exclusive right, and secure it by a "patent, would operate *as a fraud upon the public*, and "would hold out inducements to incur heavy expenses in "putting inventions into operation, of which the party "might be deprived at the mere will or caprice of the in- "ventor." In that case there was a verdict for the defendant.

There is no case to be found in which the patent has ever been sustained under circumstances like these—that is, where the invention was perfected and went into public use for six or eight years before the application was made for a patent—the inventor knowing of such public use, and not making any attempt to protect himself. If the proposition of law contended for in this case can be maintained, then it follows that an inventor may stand by and see his invention go into public use, and yet may preserve a right to a patent at any future time, by saying that he objects to such public use, and that he intends five or ten years thereafter to apply for a patent for that invention, and meanwhile does not license anybody to use it.

But this Court, in Pennock *vs.* Dialogue, 2 Pet. 23, said,

"Upon most deliberate consideration, we are all of "opinion that the true construction of the act is, that the "first inventor cannot acquire a good title to a patent, if "he suffers the thing invented to go into public use, or to "be publicly sold for use, before he makes application for "a patent. This voluntary act or *acquiescence in the pub-"lic sale and use* is an abandonment of his right; or ra-"ther creates a disability to comply with the terms and "conditions on which alone the Secretary of State is au-"thorized to grant him a patent." This law of course is modified now by the two-year privilege, but applies beyond that term.

FOURTH ERROR.

The Court erred in deciding that: "Prior to the applica-"tion for a patent, the better opinion, from the evidence, "is, that *none of the product of the new process was put "upon the market*, as the evidence is satisfactory that he "knew that sales or public use more than two years before "he applied for a patent would defeat his right."

This is a pure question of fact; but it is an important question, and the evidence on the subject is uncontradicted and conclusive. The first application for a patent was made March 8th, 1853. In February, 1848, more than five years before that date, Samuel S. Pierce, a merchant in Boston, bought the corn of Nathan Winslow, and produces Nathan Winslow's original bill, which is an exhibit in the case (Exhibit A, p. 128); and the same witness bought of Nathan Winslow in 1849, in 1850, in 1851 and in 1852, and he gives the quantities of his purchases, and no one has contradicted it.

George Burnham, at one time a partner with Samuel Rummery one of these complainants, testifies as follows:

"Int. 12 (fol. 269). Do you know what Winslow did with "the corn put up by him in the years 1847 and 1848?

"Ans. *I do. It was sent by him to market.*

"Int. 13. State whether or not in 1851 or 1852 any per-"sons assisted Nathan Winslow in putting up green corn, "and if so, who?

"Ans. They did. *Samuel Rummery* and William H. "Beaumont."

Samuel Rummery, one of the parties to this suit, who worked for Nathan Winslow in 1848, and who is interested in establishing the proposition that this corn was never sent to market, knows whether Burnham told the truth or not, and he was examined in 1872, *after* Burnham, who was examined in 1871, for the purpose of depreciating the effect of the testimony already given, which showed public use and sale; and he *did not contradict* Burnham's testimony that Nathan Winslow's corn in 1847 and 1848 was sent to market. On the contrary, he proves that he saw some of Nathan Winslow's corn in the office of Grinnell, Minturn & Co., New-York, in 1848 or 1849, and he tries to divest that fact of any importance by saying that Grinnell, Minturn & Co. "knew nothing about the quality "of the article; had no opinion to give; the cans were "not labelled" (fol. 306, Q. 6). How he knew that *unlabelled* tin cans contained corn, and not something else, does not appear; but he knew it, and knew it was Winslow's. Probably they were labelled as usual.

This witness, however, inadvertently lets out a fact, which is conclusive, if there was not another word of testimony, that Nathan Winslow was carrying on the business of canning and selling corn in 1849 and '50, as regularly as he ever did afterwards; and that fact is stated at fol. 308 as follows: "Winslow *had some cans which were very poorly* "*made;* the seams were not strong enough to stand much "pressure, and in *order to use those cans we were obliged* "*to boil them with the hole open* to prevent them from "bursting. There was no correct system of making cans "at that time; *they were mostly made by hand.*" The theory of this case is that none of the cans were sold before 1853; while the fact thus proved by one of the complainants himself, is, that in 1849 or '50, Nathan Winslow was using some cans which were accidentally bad, in order to carry on his business, because he could not get all his cans certainly good in those days!

J. R. Ford, a witness of the complainant, proves that, to

his knowledge, Isaac and Nathan Winslow were packing corn "*for the market*" in 1850, and that he knew of it *earlier than* 1847, when it was competed with corn put up in Eastport by the corn-packers there (fol. 301, Q. 6 to 8).

Jones himself, the complainant, proves that this corn was well "*known in the trade*" before 1849.

The defendants' witnesses, Stephen H. Provost (fol. 184) and Isaac Reckhow (fol. 182) proved it to have been on the New-York market in 1848 or 1849—Provost being the *commission merchant of Nathan Winslow* for its sale in those years, and from that time on until Nathan Winslow's death.

Whittier, the witness for the complainant, upon whose representations of what *Isaac said* this decision is founded, did not have the face to deny that Nathan sold it. He says (fol. 296), "I do not know how much, when, or where "was sold by Nathan."

Samuel Rummery, one of the owners of the patent, and one of the parties to this suit, says (fol. 89, Ans. 6), "I had "seen a sample of the corn packed in that way in 1845, and "when I came to Portland, it was shown to me by Nathan "Winslow." He went into the employment of Nathan Winslow in 1848, who was then carrying on the business; and he compares the corn put up at Eastport, which he says was cooked before it was put into the cans, with the Winslow corn then made, which was not so cooked; and he says that "Winslow's was much the best" (fol. 90). He says that about half of Nathan Winslow's corn spoiled "before it went out of the shop." He does not say that this corn, when it went out of the shop, was not sent to market; nor has any witness said so; and it is incredible that Nathan Winslow, who was manufacturing Winslow's corn from year to year, in competition with other people who were practicing the same invention, at the same time, and in the same town, did not sell the product of that manufacture.

It is true, no doubt, that Nathan Winslow lost half of his corn, as Rummery swears; and why he lost it is explained by Ring, who was putting up corn in this

way in Portland in 1851, and for several years afterward. Ring punctured his cans, but Winslow did not—except where he had exceptionally weak cans—and as a consequence, Winslow's cans "bulged out" at the ends, and his corn was known as "swell-headed corn" (fol. 182). Winslow supposed that this was the best way; but Ring thought that the corn spoiled because it was not punctured, and so said to Nathan. Nathan, however, said, "that Isaac had got "it from a packing-house in France, and he had no doubt it "was right," and insisted that the *half* of the corn packed without puncturing, which was saved, was worth "*three* "*times as much*" as Ring's corn, the cans of which were punctured (Ans. 11, fol. 240). Since that time, as the evidence shows, the Winslow party have given up the attempt to preserve corn without letting out the air by puncturing, and now the losses are much smaller.

To all these specific facts there is no contradiction whatever. No one denies or questions Burnham, or Pierce, or Ford, or Provost—witnesses on *both sides*—who prove these facts, and who could be contradicted by those who knew. No one attempts to account for the years of manufacture by Nathan Winslow before 1853, when he was so anxious to produce the article that he used inferior cans at times, and resorted to what he supposed to be an inferior method, upon any other theory than that he *sold* the product.

The contradiction that is attempted is by Jones himself and by Whittier. On his first examination (fol. 68, Q. 44), Jones says that Nathan first "engaged in packing corn" "as an *established business* from 1852 to 1853," and that he became Nathan's partner in 1853. What he meant by an "*established business*" does not appear; but it does appear that in 1848, at least, Nathan was selling it to merchants in Boston and New-York. After the defendants had proved their case, Jones was recalled to rebut it. He was not asked whether any one of the specific facts proved was true, but was asked (fol. 304, Q. 6), "At what time *you* "(*he*) *and Nathan Winslow* began to offer corn for sale in "the market; and what knowledge, if any, there then ex-"isted in the market of such an article?" To this he

answered: "In 1852 and 1853. It was first offered in "New-York and Philadelphia *regularly* for sale. There "was no knowledge of any such article in the market at "that time, etc.;" and this is all he swore to. And inasmuch as Jones and Winslow did not become partners till 1853, it is no doubt true that *they* did not offer the corn for sale earlier. And, if by the word "regularly" is meant that the corn became a regular article in the hands of grocers generally at that time, that is probably true. If it means that before those years the sales by Nathan were "irregular," that may be true; although it is certain that Pierce was a *regular* customer from 1848 onward, and that Provost was a regular commission merchant for its sale from the same year onward.

Whittier's testimony is still worse. He was "Nathan Winslow's *confidential clerk* from 1842 to 1852" (fol. 295, Ans. 2), and "was on intimate and confidential terms "with both Nathan and Isaac Winslow, and knew *about* "*their business nearly twenty years.*" He therefore *knew* whether Nathan was manufacturing for the market from 1846 to 1853 or not; but *no such question* was addressed to him by the complainants. They asked him six questions only (fol. 293), but not one whether Nathan was selling this corn, either with or without the knowledge o Isaac. The defendant's counsel, however, took the unnecessary risk of asking that question himself, and Whittier answered: "I do not know *how much, when, or where* was "sold by Nathan." He was sure, however, that Nathan had no "*written permission*" from Isaac to sell; which is no doubt true, when it is considered that, as Whittier says (Ans. 3), he "never knew any business connection between "them. They were brothers, but *not associated in busi-* "*ness;*" and that Isaac had no patent under which to give permission; and that any one who pleased—and several did please—might carry on this business without asking Isaac's permission, either oral or written. He is sure, however, "that none of the corn was *sold or sent to market by* "*Isaac;*" which is true enough, as Isaac was not its owner, and Nathan was.

Whittier's statement that he had "several times heard "him (Isaac) refuse Nathan's request for permission to sell "even very small quantities" of this corn, impresses the mind with the uncertainty of human testimony, when conversations heard as these are supposed to have been, *more than twenty years ago*, are to be recalled. Here was Nathan Winslow manufacturing, at his own cost, from year to year, for several years, this product. Isaac had no interest in it whatever, and no connection with Nathan in business; and yet Nathan was asking permission to sell his own property of a person who had no control of it at all, and was "repeatedly" refused! That state of things, if Nathan submitted to the refusal, must have been satisfactory to the other manufacturers with whose corn Nathan's was "competing" in the market; but how Nathan was to get his money out of it does not appear. Jones tells us that in 1849, Kemp, Day & Co. were manufacturing corn in Portland, in cans hermetically sealed and cooked (fol. 81); and Ford, the complainant's own witness, tells us that in 1849 and later the Eastport corn was competing with the Winslow.

POINTS.

First.

The patent No. 35,274 is void upon its face just as the patents 35,346 and 36,326 were decided to be void, and for the same reason; which is, that all three are patents for the same invention fully described in the first patent, No. 34,928; and, if they could be upheld, the term of seventeen years would be extended by the patents of later date, which included the inventions patented at an earlier date. Again, none of these three patents is, or can be, connected with the original application of 1853, which was exhausted when the first patent was granted under it; and therefore these three patents are void; because it is not denied that, for at least twenty years before their dates, the things patented were in public use, nor that they were in public use, with the consent and allowance of the inventor, for at least nine years before their dates, or the dates of the applications upon which they were granted.

SECOND.

Both patents, Nos. 34,928 and 35,274, are void; because whether they are for the same thing or for different things, the whole subject is contained in Durand's, Gunther's, and Wertheimer's patents. The Appert process is for preserving vegetables *generally;* and Durand's patent describes the very process practised in this case. Whether the can is punctured before the process begins, and sealed after the air is expelled, as described in Durand's and Wertheimer's patents, or whether it is punctured during the process and then sealed, as described in Jones's patents, the "same result is achieved in both cases;" which is proved by James P. Baxter, one of the complainants herein (folio 316, Q. 4); so that there is no difference whatever between the process described in Durand's patent, and that described in Jones's patent. All that can be said to support the Jones patents is, that

Durand does not mention corn, or any other vegetable substance, *by name;* and, therefore, that another may patent the application of the Appert process to any vegetable which he may select, provided he does something, by way of preparing the vegetable, not suggested by Appert, such as cutting off the corn from the cob; or provided the vegetable he selects yields with difficulty to the process, and can be distinguished chemically from other vegetables; which we submit can not be maintained as a proposition of law. This is only such a use of the invention of Appert as is pointed out, and intended by the Durand patent; and it does not constitute an invention to so apply the Appert process. It is not an *invention* to separate the edible portion of the vegetable from the husks, before it is subjected to the process, when the object is, as Appert's was, to *preserve food.* Durand's patent does not contemplate the preservation of the pods of peas, or the husks or cobs of grain; and it is not the subject of a patent, to inform the world, that only the edible parts of vegetables are to be preserved by that process. People never eat the other parts, and do not need to preserve them.

THIRD.

The first patent, No. 34,928, was connected, by the Patent Office, with the application of March 8, 1853, and this was done by an affidavit of Isaac Winslow; but the invention therein described—namely, the *product*—was not applied for in 1853, as the Patent Office records show, but a "*process*" of some kind was then applied for; and therefore the patent No. 34,928 cannot lawfully be connected with the original application at all, and cannot derive any benefit from that application. While it is true that, before the Act of 1870, an inventor might leave his rejected application pending in the office for ten years, and then have a good patent under it, yet he cannot tack some other invention upon the original application, and then patent that, as if it had been applied for originally.

The only thing in regard to that application, which is

certain in this case is, that Isaac Winslow, in 1853, applied for a *machine* of some kind, and a *process* of some kind—which process included a *vent* as a part of it. It may have been such a process as Wertheimer patented in 1841, in England, or it may have been some other process requiring a "vent;" but whatever it was, it certainly was not the "product" which Jones patented in 1862, under a different application, sworn to February 18th, 1862. The record shows that August 2d, 1854, Isaac Winslow withdrew the specification of 1853 from the Patent-Office, and receipted for it (fol. 165); and that specification was never returned. The *title* of that invention, however, when its specification was in the office, is in the original petition, still on file (fol. 161), and is "a new and improved *mode of preserving green corn.*" The title of the invention on which the patent was issued is, "a new and useful *improved Indian-corn preserved green.*" The one is for a new "mode" of doing an old thing; and the other is for a "new product," of which the patent says that "*other modes* of treatment may "be adopted, without departing from my invention, so long "as the hermetrically sealing and use of the heat are so "managed as to secure the aroma and fresh flavor and pre-"vent putrefaction, thus producing *the new article* of "manufacture substantially described."

Upon the face of the papers, therefore, it appears that the invention patented in 1862 is different from the one applied for in 1853. The burden of proof is upon the patentee to show that he applied in 1853 for what he afterward patented, and that he was wrongfully delayed in the office. The presumption must be against the theory that the office first rejected and afterward granted a patent for the *same thing;* and in this case the record supports the presumption. Upon its face, the present patent bears date April 8th, 1862. If the complainant proposes to carry it back to 1853, so as to cover nine years of admitted public use, he must establish the fact that the invention now patented was applied for in 1853. The *records* of the office show it was a different invention; and the way in which the complainant pro-

poses to overcome those records, is by the affidavit of Isaac Winslow that the present "specification is *substantially the* "*same* as the one *originally filed* in the Patent Office" (fol. 158). Perhaps the Court would not agree with the affiant in his views of "*substantial*" identity, if he produced his original specification, as "originally filed;" and it is certain that it could not so agree, without holding that a specification which required a "model and drawings" to illustrate it, which was the one "originally filed," and which also included some kind of a "process" with a "vent" was "substantially" the same thing as a specification for "Indian "corn, when preserved in the green state, without drying "the same, the kernels being removed from the cob, hermet-"ically sealed and heated, substantially in the manner, "and for the purpose set forth."

FOURTH.

More than six years before March 8th, 1853, the product patented by this patent, No. 36,928, was in public use and on sale in the markets of the United States; and such public use was known to, and *therefore allowed* by, Isaac Winslow. In law, an inventor who knows that his invention is in public use, and does not immediately protect himself by an application for a patent, "allows" that public use, within the meaning of the statute, and cannot afterwards assert any right against the public. Consent and allowance do not depend upon what the inventor *says*, but upon what he *does*. (Shaw *v.* Cooper, 6 Pet. 321. Pennock *v.* Dialogue, 2 Pet. 23).

FIFTH.

The patent No. 35,274 stands upon no other date than May 13, 1862. It was granted upon an independent application at that time, and is entirely independent of No. 34,-928; and undoubtedly the process therein patented had been in public use for ten years before 1862, with the consent and allowance of Isaac Winslow. That patent is therefore void in law, and it is open to the public to use that "process."

If, however, the public can not use that "process," notwithstanding the patent is void, without infringing the first patent, which depends upon the same process, that proves at once *in this case* that the two patents are for the same thing; and therefore the second patent is void for that reason. If, on the other hand, the public can use the process which is covered by the second patent, notwithstanding the existence of the first one, then this defendant cannot be held responsible for the use of the process-patent, even though the product is necessarily produced by its use.

SIXTH.

It is not necessary that the inventor should have given his consent to the *sale* of his invention. If he allowed it to go into *public use*, that defeated his right to a patent; and in this case the testimony is all one way that he "allowed" Nathan Winslow to manufacture this corn for at least six years before 1853; which is a *public use* of the invention, whatever Nathan Winslow did with the product of his manufacture. If he had thrown it into the sea at Portland, after manufacturing it, it would have been a public use of the invention, just as much as if he had sold it or given it away. But, in fact, Nathan Winslow not only publicly manufactured it, with the knowledge of Isaac Winslow, but sold it as a regular business for many years, in competition with others manufacturing the same article; and no amount of evidence that Isaac Winslow at some time was heard to object to a sale by Nathan, over or with whom he had no control or connection, can destroy the presumption that he knew of Nathan's sale. At any rate what was well known to the merchants in New-York and Boston, who were dealing in canned goods for five years before 1853, must be held in law to be known to Isaac Winslow, who, in fact, did know that his brother was manufacturing the goods and sending them out of his factory. The patents are therefore void.

EDWARD N. DICKERSON,
Counsel for Appellant.

[redacted]

No. [redacted] 52.

RUFUS K. NEWALL, [redacted]

vs.

HENRY CLARK, [redacted]

and

JOHN WI[redacted]

[redacted]

Index to Heads of the Brief.

	PAGE.
Opening Statement,	3-5
Statement of Defences,	5
" of Nature of Invention, 1st Patent,	6-14
The Second Patent referred to in Bill,	14-18
State of Art at date of Winslow's Invention,	18-23
History of the Invention described and claimed in these Patents,	23-26
Defences,	26-27
As to the First Defence,	27-57
Under this—	
Testimony of Louis Bertram,	27-28
" " Charles Mitchell,	28-29
" " Upham S. Treat,	29-31
" " Henry Evans, Jr.	31
" " Charles J. Underwood,	32
" " Aaron Ring,	32
" " Geo. F. Lewis,	33
" " Geo. Burnham,	34
" " Isaac Reckhow,	34
Remarks on this Testimony,	36-42
As to the reliability of this evidence,	43-45
Documentary evidence under First Defence,	45-57
As to Second Defence,	57-60
As to Third Defence,	60-67
As to Fourth Defence,	67-75
As to acts of Inventor from the date of his Application to date of issue thereof,	75-81
As to Infringement,	82-83
General Observations,	83-86
Observations upon testimony of S. Dana Hayes and S. P. Sharples,	86-98
Value of this discovery,	98-99
LAW,	100-102
As to acts of Inventor from 1842 to 1853,	102-104
As to acts of Inventor from 1853 to 1862,	104-107

Respondent's Witnesses—How Contradicted.

Reckhow. p. 89.	Contradicted by Baxter, p. 89. By Hudson, p. 89.
Provost. p. 91.	Not certain of date, p. 92.
Mitchell. pp. 92 & 97. Int. 50.	Contradicted by *Ford*, p. 152. Ans. 7,8,9,10. By *Rumery*, p. 41. Ans. 3, 4. By *Treat*. Ans. 12, 15. Cross Ans. 1, 2.
Evans. p. 104. Ans. 5. Cross 1.	Contradicted by *Treat*, p, 101. Cross Ans. 1. By *Provost*, p. 92. By *Lewis* p. 132. Ans. 36 to 46, also by Ford p. 152, Ans. 7 to 10. By Rumery, p. 41. Ans. 3, 4.
Underwood. p. 109. Ans. 4. p, 111. " 1. p. 111. " 4.	Contradicted by *Treat*, p. 100. Ans. 14, p. 101 Ans. 1, 2. By *Ford*, p. 152. Ans. 7, 8, 10, 13, 14.
Treat. p. 99.	Does not claim date earlier than 1852. Ans. 1, p. 101. Ans. 10 same page.

Supreme Court of the United States.

RUFUS K. SEWELL, Adm'r of Henry Clark.

APPELLANT.

VS.

JOHN W. JONES, et. als.

Brief for Complainants and Appellees.

This is an appeal from a decree of the Circuit Court of the United States for the first Circuit, and District of Maine.

The bill was filed in the District of Maine in November, 1867.

The final decree was entered in 1873, in favor of the Complainants.

P. 25, *Trans. of Rec.*

The bill is founded upon four Letters Patents of the United States, granted to Isaac Winslow now deceased. The Patents relate to the Preservation of Green Indian Corn.

The corn is preserved in hermetically sealed cans, usually of tin.

The FIRST Patent referred to in the bill is for a Product, or New Article of Manufacture, to wit; INDIAN CORN PRESERVED IN A GREEN STATE *without drying the same.* It is dated April 8, 1862. No. 34,928.

Trans. of Rec., p. 3.

The SECOND is granted upon a Process of preserving green corn, *by first removing the kernels from the cob and then preserving the kernels in the cans or vessels, and in the juices of the cereal.* It is dated May 13, 1862. No. 35,274.

Trans. of Rec., p. 5.

The THIRD was issued upon a process of preserving Indian corn in the green state by such treatment, *as not to render the complete expulsion of atmospheric air from the cans or vessels, necessary,* It is dated May 20, 1862, and is No. 35,346.

The FOURTH Patent was issued upon a method of *preventing the bursting of hermetically sealed cans or other vessels whilst they are exposed to heat for cooking or preserving their contents by means of puncturing such cans or vessels when first heated, or otherwise giving vent to the contained air soon after heating, the cans or vessels being thereafter immediately resealed and the heat continued,* &c. It is dated Aug. 26, 1862, and is No. 36,326.

The first two Patents named, to wit: Nos. 34,928, April 8, 1862, and 35,274, May 13, 1862, were declared to be good and valid Letters Patent, in the decree in the First Circuit.

Trans of Rec., p. 23.

The two last, to wit: No. 35,346, date May 20, 1862, and No. 36,326, date Aug. 26, 1862, were declared void Patents, because granted for substantially the same invention as that described in the Specification attached to Letters Patent No. 35,274, May 13, 1862, which is the second Patent referred to in the Bill of Complaint.

Trans. of Rec., p. 23.

The first two Patents referred to in the Bill of Complaint were sustained; the last two were decided to be embraced in the second of earlier date.

The four Patents were granted to Isaac Winslow, assignor to John W. Jones.

The Bill was originally filed under the name of John W. Jones, assignee.

John W. Jones, after the filing of the Bill, assigned certain interests in the four Letters Patent to the other persons named as complainants.

These were then by agreement made complainants in the bill.
Trans. of Rec., p. 16,

The title of all the parties Complainant is admitted.
Trans. of Rec., p. 16.

The defences set up in the answer are four in number.

1. That the Patentee was not the original and first inventor of the improvements as set out in the Bill of Complaint.

2. That the alleged improvements are old methods applied to a new use, and that the several improvements were well known and in public use prior to the alleged invention by the Patentee.

3. That the several improvements were in public use and on sale more than two years before the Patentee made his application for a Patent.

4. That the Patentee abandoned his invention to the public.

Before proceeding to the discussion of these defences, and considering the evidence applicable to them, attention will be called to the nature of the inventions themselves which are embraced in the first two Patents referred to in the Bill, to wit: No. 34,928 and No. 35,274.

The two Patents of later date, having been declared invalid by the Circuit Court, will not be considered in this Brief.

The first Patent referred to in the Bill, as before stated, is for a *new article of manufacture, or product, viz: Indian Corn when preserved in the green state without drying the same, the kernels being removed from the cob hermetically sealed and heated.*

It will be observed that in claiming this product it is specified to be in such a condition that the kernels are removed from the cob when preserved.

This condition of the kernels, together with the state in which they are removed, constitutes the chief feature in the claim.

Corn might be preserved when not in the "green state," the kernels being removed from the cob; but the article would not then be such as claimed in this claim, because it would be in a different "state" from that of the corn claimed.

So also corn might be preserved in the "green state," but the

kernels not removed from the cob, for the purposes of preserving them.

It is plain that this Patent for the product is inseparably connected with the second Patent referred to in the Bill, to wit: the process; from the reason that while the claim in the second Patent for the process is one for removing the kernels from the cob before the hermetically sealing and treating, the claim of the first Patent, or that on the product, is on a product which has thus been removed from the cob.

To obtain the product referred to in the first Patent in the Bill, the following things are necessary;

1. The corn in the natural state, and green.
2. Removal from the cobs.
3. Hermetically sealing and heating.

The reason for the first requisite is found in the nature of the article sought to be preserved, to wit: Corn in the green state.

The effort of the inventor was to take green corn, in the milk, or in that state in which it is commonly boiled for table use in its season, and to preserve it in that state so that it could be eaten out of season, and still possess the flavor of green corn.

It was necessary therefore, that the corn should be first plucked in that condition or stage of development at which it is commonly used on the table.

The reason for the second step by which this product is manufactured is perhaps the most important of all.

This one is that the kernels are cut from the cob.

This fully appears both in the specifications of the Patents themselves and in the testimony.

The kernels are cut from the cob before placing in the cans in order that the juices contained in the kernels may, to a certain

extent, flow out of the same and surround the kernels within the can in which the whole mass is placed.

The first Patent says as follows:

"*By this method of cooking green corn in the vapor of its juices*," *&c.*

It further says—

"*Being preserved in its natural state as near as possible, &c.*"

Trans. of Rec., p. 4.

The second Patent says that—

"*The kernels of corn* (were) *somewhat broken by removal from the cob*," and it further says that the milk and other juices were retained.

Trans. of Record, pp. 5 *and* 6.

Baxter says as follows:

"*Winslow's process contemplates taking corn in an immature state, and breaking the cells so as to liberate the juices, which, exuding, form a menstruum or fluid envelope around the kernels.*"

Trans. of Rec., p. 57.

Hayes says—

"*The whole success in preserving sweet corn depends upon this cutting open, or breaking of the kernels before they are put into the cans for cooking.*"

Trans. of Rec., p. 61.

And again he says—

"*When kernels that have been cut open, broken, and removed from the cob are heated in closed cans, the juice or milk partially exudes from the kernels, surrounding each and all of them in a fluid in which they are cooked.*"

It is not considered necessary to cite further from the testimoney upon the Record in order to show the reason for the sec-

ond step in the process by which the product, the subject of the first Patent, is produced; because the result of this step, and its effects upon the article produced are not controverted or attempted to be controverted.

It may therefore be safely stated that it is without contradiction in the case that the kernels are cut from the cob for the purpose of liberating their juices, and allowing a portion of them to flow out from the kernels and surround the kernels when placed in the can.

The kernels and their juices are then in the best condition for receiving the action of heat which is the agent employed for fixing and coagulating the constituents of the corn, so that they are not afterward liable to fermentative change.

It is obvious that the kernels of ripe corn are not susceptible of being manufactured into this product, because by reason of maturity the kernels contain no juices at all.

But when the corn is sufficiently green to admit of the flowing out of the juices, when the kernels are cut or severed, then they are capable of being made into the product described in the first Patent.

The cutting of the kernels from the cob previous to the time when the final application of heat is made, is also essential to the preservation in and around the kernels of the aroma and flavor of green corn.

The testimony shows that the cooking could not be done while the kernels were in their natural state of connection with the cob, because by that process the porous cob would absorb much of the juices and sweetness of the kernels.

And the testimony also shows that if the kernels were cut from the cob, and completely cooked in water or steam, before being placed in the hermetically sealed cans, that much of the

juices would be lost; being washed out by the steam or water by which they were cooked.

But when the kernels of the corn in the green state are severed from the cob so that the juices of the kernels may exude or flow out and surround the kernels in the cans, the requirements of this second step are complied with.

Those requirements are not complied with when the kernels have been cooked upon the cob, and consequently either coagulated within the cells of the kernels or absorbed by the cob. Neither are they complied with when the kernels being first severed from the cob are first cooked in steam or water before being placed in the cans.

The object of the second step is evidently to remove the kernels from the cob when the kernels are in such a state that their juices will flow out and surround the kernels when they are placed in the cans.

This is well explained in the testimony of S. Dana Hayes, State Assayer and Chemist for the Commonwealth of Massachusetts on *p.* 62, *Ans.* 13, *Trans. of Rec.*, as follows:

"*The difference between cutting corn from the cob, releasing the juice from the kernels by so doing, then packing it in cans for preserving with the juice and milk, and between boiling, either on the cob or off the cob, before putting into cans, becomes very apparent in the finished preserved article. All the sugar, starch, gum, and oil (including flavor) are present in that preserved in the juice; while that which has been first boiled contains much less of these valuable constituents, which would be boiled out, while the proportion of insoluble and innutritious fibre is increased and left in the corn.*"

It is sufficient to say that this explanation of Mr. Hayes is not contradicted by any testimony offered by the Respondents'

Appellants, and may therefore be considered to be conceded to be correct.

Whenever the kernels are severed from the cob preparatory to being placed in the cans, in such state that the juices of the kernels will partially exude therefrom, the kernels are in such state that they may be manufactured by the process described in the second Patent into the product described and claimed in the first Patent.

The third step referred to in this first Patent and in the claim of the specifications thereof is the placing of the severed kernels with their juices in cans or vessels, hermetically sealing the vessels and then submitting the hermetically sealed vessels to water heat in order to destroy the germs of fermentation in the kernels and their juices and to coagulate the juice or milk of the corn, and thus arrest its tendency to fermentative change.

Upon the effect and necessity of this last step to produce the article claimed in the first Patent there is no dispute in the testimony.

It is to be observed, however, that when the kernels are so placed in the cans which are hermetically sealed for cooking, that these kernels do not contain their juices *in themselves*, but that they are heated or cooked *in their juices*. That is, the kernels are cut from the cob and a portion at least of the juices have *flowed out* and surrounded the kernels in the cans.

This it is submitted means—

1. That the kernels are not so ripe but that the juice will flow out, *i. e*, the corn is green.

2. The kernels have not been so far cooked, either on the cob or in steam or water, that the juices have in the one case been coagulated within the kernels or absorbed by the cob so that they will not flow; or in the other so thoroughly cooked that they have been washed out and passed away into either the steam or water.

A few further extracts will be made from the testimony on the Record to substantiate these propositions, and it may be added that no contradiction to them was even offered.

1. "*The kernels are cut from the ear so as to allow the juices to exude; the mass is then put into a can, &c.*"

Trans. of Rec., *p.* 158.

2. The Second Patent specifies that in the removal from the cob the kernels were broken, and that therefore the milk and other juices were "*dissolved out*" when the cooking was done before the hermetically sealing of the kernels and juices in the cans.

3. Another witness says, describing the process pursued by Isaac Winslow in his early experiments, that "*The corn was cut from the cob * * * * * Then the cob was scraped to get the juices.*

Trans. of Rec., *p.* 29.

4. Another, describing similar experiments—

"*First we cut it off the cob; scraped the cob to get the milk. It was then put in the cans.*"

Trans. of Rec., *p.* 50.

5. Hayes says—

"*The whole success in preserving sweet corn depends upon this*

cutting open or breaking of the kernels before they are put into the cans for cooking.

Trans. of Rec., p. 61.

And he says the effect of this cutting is that "*the juice or milk partially exudes from the kernels.*"

It will thus be seen that the subject matter of the claim of the first Patent is for a product which is green corn preserved in hermetically sealed cans, separated from the cob in such state that the juices of the kernels will exude when thus separated, and that this article is preserved by the application of heat to the vessels when thus closed, and when containing the article in the condition described.

It is evident that in dealing with the tender kernels of green corn, it would be difficult to remove them from the cob without breaking; but if they should be so removed, it is plain that the juices would have no opportunity to exude; and it is probable that cooking them in that condition would increase the proportion of woody innutritions fibre in them. And their juices would not be cooked and coagulated while the kernels were in the juices; but they would be while the juices were in the kernels.

Complete cooking is evidently required in the cans for the preservation of the corn; for the second Patent specifies a time of about four hours and ten minutes, during which the cans are placed in the bath.

There is nothing in the testimony in this case, either by the Defendants' expert witness, or by any other witness introduced by the Defendant, which makes any attempt to contradict the position taken by the Complainants upon the necessity of cutting the kernels from the cob in such a state that the juices will exude to some extent and surround the kernels in the can.

This may therefore be assumed as proven in the subsequent discussion upon the character and validity of these Patents.

THE SECOND PATENT REFERRED TO IN THE BILL OF COMPLAINT.

This is a Patent issued upon a process, and is best understood from the phraseology of the claim, which is as follows:

"*The above described process of first removing the corn from the cob, and then preserving the kernels, substantially in the manner and for the purposes set forth.*"

It will be seen from the claim that it is alleged upon the very step which in the discussion of the character of the first Patent has been stated to be indispensable, to wit: The removal of the kernels from the cob before packing them in the cans.

The same citations from the testimony which have been made in the discussion of the first Patent, apply with equal force to the second one, the specifications of which are found on *p.* 5, *Trans. of Rec.*

The claim of this second Patent shows that great importance was attached by the inventor to this step of removing the kernels from the cob.

It is evident that when the cans, containing the green corn, are submitted to the action of the hot bath, the kernels would require some juice or liquid in which they might float, and by which they would be enveloped while the heat was applied to the can.

This is effected by the retention in the can of the juices of the kernels.

The sweetness and flavor of the corn must also be preserved

in order to make a good article, and this is also effected by the same means.

The second Patent, No. 35,274, says on *p.* 6, *Trans of Rec.*, as follows:

"*The above described process of removing the corn from the cob, and then preserving the kernels affords several advantages over any method of preserving corn heretofore known.*

Among these advantages are the following:

The peculiar sweetness, and excellent flavor of the corn thus preserved; these qualities being consequent upon retaining all the milk and other juices, together with its fine natural aroma."

The Court says, in speaking of the removal of the kernels from the cob, that "*it is clear that the purpose of the invention as evidenced by the language of the description throughout, is to preserve, not only the farinaceous elements of the kernels, but also the milk and juices of the same which give the peculiar aroma or flavor to green corn when cooked for the table in the usual way, during the season when the kernel is full grown, or nearly so, but before the milk and juices of the kernal become concrete as in ripe corn.*"

And again the Court says—

"*That the kernels should be cut from the cob in a way which * * * * * * * breaks open the kernels, liberating the juices * * * * * * * * and causing the milk and other juices of the corn to flow out and surround the kernels as they are packed in the cans.*"

"*Evidently much is due to this feature of the patented mode of operation.*"

Trans. of Record, pp. 167 *and* 171.

In order that the juices of the kernels may thus to some extent flow out when cut from the cob, the inventor has specified

that they should be cut from the cob in the raw state, or in other words, not in such a state that the said juices being coagulated and fixed by cooking, or washed out and destroyed by cooking, would not flow out when the kernels were broken in the act of being separated from the cob.

Cooking the corn on the cob would coagulate the juice or cause its absorption by the cob. This would prevent the outflow of the juice. Cooking in water would wash out or evaporate the juice, and it would be also coagulated by heat in cooking, and this would prevent the same desired result when the kernels were placed in the cans.

Therefore finding that the surrounding the kernels in the cans by the juices was essential to the process, the inventor was particular to specify the separation of the kernels from the cobs in both of the Patents referred to.

The necessity of this method of treatment to the preservation of the aroma and flavor of the corn, is not denied in the entire record; and if the testimony is to be believed, cannot be.

State of the Art prior to the Invention of Isaac Winslow.

It is shown without contradiction that Isaac Winslow made his invention in the preservation of green corn at least as early as the year 1842.

TESTIMONY OF J. W. JONES.

Int. "*State when you first knew of Isaac Winslow's connection with preserving green corn.*"

Ans. "*In* 1842."

Int. "*Describe the process.*"

Ans. "*The process was to cut it from the cob in a raw state with a gauged knife, to then scrape the cob, and then to place it in cans without previously cooking it. The cans were then sealed up and placed in water and cooked.*"

Int. "*When during the visit of Mr. Winslow at your father's (above spoken of) did Mr. Winslow commence this process?*"

Ans. "*In the fall of* 1842, *during the season of green corn.*"

Trans. of Rec., p. 27.

TESTIMONY OF WILLIAM H. SAWYER.

Int. "*Were you formerly acquainted with Isaac Winslow?*"

Ans. "*I do not think I was acquainted with him before* 1842."

Int. "*State what he was doing when you went to work for him.*"

Ans. "*He was putting up green corn and I sealed the cans for him.*"

Int. "*Describe how the corn was packed.*"

Ans. "*First we cut it off the cob; scraped the cob to get the milk. It was then put up in the cans, and I sealed it. They were then bathed. The cans were then tapped, and the tap or little hole was soldered again.*"

Trans of Rec., p. 50.

TESTIMONY OF ANDREW MULNIX.

Int. "*Please state when you thus had anything to do with him, and what it was.*"

Ans. "*Some time in one of the three years of* '39, '40 *or* '41, *Mr. Isaac Winslow employed me to fix some works for steaming green corn. The first thing I did was to make a tight fitting cover to a boiler. To that cover I attached a steam pipe to connect with*

a large wooden box lined with zinc. In that box was fixed what we call a manhole door with a steam tight cover or door. This was in an old shop attached to the property, or near the house of Caleb Jones in Westbrook."

Int. "*State what you saw the zinc-lined box used for, if anything.*"

Ans. "*We used the box for steaming or cooking green corn. One way was to boil the corn on the cob and put it in the cans and seal it, and then put it in the box and steam it for a short time. Another way was to cut the corn from the cob, raw as it came from the field, cook it in this kettle, put it in the cans and seal it, place it in the box and steam it. The other mode was to cut the green corn from the ear, place it in the cans raw and seal it; then put it into the steam bath until it was cooked, &c.*"

Int. "*Please state by which of these three methods, if either, the largest portion of the corn was cooked.*"

Ans. "*I should say by the last process,*" *&c.*

Trans. of Rec., pp. 51 *and* 52.

The testimony of these three witnesses not being met by any testimony whatever, it will be assumed that in 1842 Isaac Winslow conceived and put into practice his process of preserving green corn.

WHAT WAS THE STATE OF THE ART AT THAT DATE?

The Patent No. 35,274 recites as follows:

"*It has long been common to boil green or unripened Indian corn or maize, and then dry the same for winter use.*"

Trans. of Rec., p. 5.

In 1810 Letters Patent No. 3,372 of England were issued to one Peter Durand for a method of preserving animal food and vegetable food.

This Patent contains the following directions.

"*I place the said food or articles in bottles or other vessels of glass, pottery, tin or other metals or fit materials; and I do close the aperture of such containing vessels so as completely to cut off, and exclude all communication with the external air; and as to the method of closing, I do avail myself of the usual means of corking, airing, luting or cementing; and in large vessels I make use of corks formed of pieces glued together in such a manner as that the pores of that substance shall be in cross direction with regard to the aperture into which such corks are to be driven.* * * * * * * * *When the vessels have been thus charged and well closed I do place them in a boiler, each separately surrounded with straw, or wrapt in coarse cloth, or otherwise defended from striking against each other; and I fill the said boiler so as to cover the vessels with cold water, which I gradually heat to boiling, and continue the ebulition for a certain time, &c.* * * * * * * * * *Vegetable substances are to be put into the vessel in the raw or crude state, and animal substances partly or half cooked, although these may also be put in raw.*"

Trans. of Rec., pp. 64 *and* 65.

In the 5th American from the 5th London edition of Turner's Chemistry, Section 7, pp. 635-6, the following extract may be found:

"*It is probable that when moisture and warmth concur, putrefaction in animal matter which has not been heated to* 212° *will take place independently of atmospheric influence. But when animal matter has been boiled, and is then, without subsequent exposure, completely protected from air, it may be preserved for years, even though moist and in a temperature favorable to putrefaction* * * * *

The mode generally adopted is the following: Into a tin vessel is placed any kind of food, such as joints of meat, fish, game, and vegetables, dressed for the table, and into the interstices is poured a rich gravy, care being taken to have the vessel completely full. A tin cover, with a small aperture, is then carefully fixed by solder, and while the whole vessel is perfectly full, and at the temperature of 212°, *the remaining aperture is closed. As the ingredients within cool and contract, a vacuum is formed if the operation has been skilfully conducted, and the sides of the vessel are in consequence slightly pressed in by the weight of the atmosphere.*"

Trans. of Rec., p. 147.

Chapter 7, p. 101 of a Philadelphia edition of Liebig's Chemistry, edition of 1841, contains the following:

"*Animal food, of every kind, and even the most delicate vegetables may be preserved unchanged if heated to the temperature of boiling water in vessels from which the air is completely excluded.*"

Trans. of Rec., p. 148.

The English Patent to Henry Gunter, date 1841, describes nothing new over the Durand Patent of 1810, except the following method of venting the cans, which has no similarity to the Winslow method of venting. The inventor says that after boiling the sealed cans in water, "*I place them in a hot sand bath or other convenient means of applying heat so as to leave the upper end uncovered; I puncture therein a minute hole, the heat being kept up to insure its being about* 212° *of Fahrenheit, the air in the case or vessel will be drived out by the steam, &c.*"

Trans. of Rec., p. 66.

The English Patent to John Wertheimer of date 1840 claims,

in addition to the Patents of Durand and Gunter, "*the mode of preserving animal and vegetable matter in closed cases by expelling as much air as I can by means of heat, then closing the openings and continuing the heat after closing for a time, in order to decompose the remaining atmospheric air.*"

Trans. of Rec., p. 69.

These citations it is believed show correctly the state of the art in 1842, the latest date assigned as the date of Isaac Winslow's invention.

From these it undoubtedly appears that the placing of articles of food in hermetically sealed vessels, subjecting them to a heat of 212°, puncturing the vessels to admit of the escape of steam and gases, was publicly known and described previous to the date of Isaac Winslow's invention.

1. These publications, however, do not mention, or even refer to corn in any condition.

2. They do not in the remotest manner at all refer to the preservation of any article in a green or immature state.

3. They do not particularize what is proved to be absolutely indispensable in the preservation of green corn, viz: The cutting of the green and milky kernels from the cob, in order that the juices of the same may partially flow out and surround the kernels in the cans.

The process described by Durand, and supplemented in the other Patents referred to, is found to be first associated with the name of Mons. Appert, in France, at a date little earlier than 1810, and is generally distinguished by the title of the Appert Process.

Under this process meats, fish and vegetables (for the most

part, however, cooked before being placed in the cans) have long been preserved in England and in France; but the art was not known or practiced in this country in any way till considerably subsequent to the date of Isaac Winslow's invention relating to green corn.

The Appert process, however, was wholly unsuited to so delicate an article as green corn, and one so quickly liable to fermentative change and souring.

Green corn was unknown in England and in France, and therefore it is not possible that the specifications of these Patentees could have at all had it in contemplation.

The entire absence of necessary details in these Patents, which details are absolutely indispensable to the preservation of green corn, and which details have above been enumerated, not only prove that following these specifications corn could not be preserved, but also that the Patentees never had the article in mind.

Previous then to the date of Isaac Winslow's invention, the art of preserving articles of food in hermetically sealed vessels had so far advanced as to become applicable to meats, fish, fruits, and vegetables, and it was known that by the application of heat to the vessel, the air within would expand, could then be let off through a minute puncture in the vessel, the puncture then closed, and the remaining germs, if any, of fermentation in the cans, be destroyed by subsequent heating.

The action of the oxygen of the air in exciting change in the composition of the azotized matters dissolved in the juices of animal or vegetable food, was understood, and therefore the necessity of its expulsion from the vessel. This was the foundation upon which Isaac Winslow built his invention, and the point from which he started in the invention of a process for the preservation of green corn.

It is important to observe that previous to the invention of Isaac Winslow, meats, fish, fruits, and vegetables had been preserved by the process described in the Durand Patent, but that no corn had been preserved.

History of the Invention described and claimed in these Patents.

The testimony shows that sometime previous to the Autumn of 1842, Isaac Winslow wrote from France to Caleb Jones at Westbrook, in the District of Maine, to plant for him a piece of ground with sweet corn.

At that season of that year when the corn was in the milk, Isaac Winslow came to Westbrook and proceeded to make experiments in the preservation of green corn.

The experiments were conducted on a small way in that year, and many of the cans which contained the preserved article exploded or burst, and the contents were lost. Some of the cans, however, proved to be strong enough to resist the strain and pressure upon them, and those which remained whole, preserved the article sound and sweet for many years afterwards. From that time to the year 1849, Isaac Winslow visited Westbrook and put up small quantities of corn annually.

He made these experiments with a view to an application for Letters Patent and declined to have any of his manufactured articles sold until his application for Patent was made.

Experiments in preserving green corn were made by him by cooking the kernels while on the cob. But he soon ascertained that in this method the juices of the kernels were, to a large extent, absorbed by the porous cob, and that the product lacked sweetness and flavor, while at the same time the proportion of

woody and innutritious fibre in the kernel was largely increased.

A method of cutting the kernels from the cob and then boiling them in hot water in kettles was next attempted; but by this process it was found that the juices of the kernels were washed out and evaporated away, and that the product still lacked flavor, tenderness, and juice.

The next trial which was made was the successful one, and in this the kernels were cut from the cob, and they, with the juices which had flowed out from them, were placed in hermetically sealed vessels, and submitted to the action of the hot bath while still contained in the said vessels.

This trial was found to produce an article of preserved green corn which would maintain a sound condition for a long period of time.

This experiment was successfully conducted in the year 1842, and it was repeated for several successive years during the few days of each year in which the corn was in the proper stage of developement for packing, until 1849 or 1850.

The cans of corn which resisted the pressure caused by the process, with the exception of those which were presented to friends and other persons for trial, were stored in the attic of an old building on the premises of Caleb Jones, in what was then called Congin, and in the attic of Nathan Winslow's store, (the brother of Isaac) on Union Street, and on Union Wharf, in the City of Portland, Maine, to ascertain if the contents would keep in a sound condition.

In 1853 application for Letters Patent of the United States was duly made by the inventor.

This application received a first rejection.

The application was ordered to be divided so as to separate the process of removing the kernels from the cob, from the sub-

sequent steps of treating the article after being placed in the vessels to be hermetically sealed.

No second rejection was ever given; but the application remained in the Patent Office from 1853 to 1862.

During this interval of time it is in proof that the inventor was at Washington several times in the pursuit of his Patent, and there is nothing to show that he at any time relinquished his application, or failed in any efforts to bring it to an issue.

The oath was renewed as was then required by law, and in the spring of 1862, four Patents were duly issued upon the inventions, the claims of which have been noticed at the opening of this Brief.

During the progress of his experiments the inventor was met with three obstacles which impeded him in the bringing of his efforts to a prompt conclusion.

1. He was poor and depended upon the assistance of his brother, Nathan Winslow, for the means with which to conduct his experiments.

2. The art of making cans was not then well understood, and could not supply himself with cans of strength sufficient to resist the strain and pressure occasioned by the evolution of vapor and gases resulting from the application of heat to the cans containing the article to be preserved.

3. *He was necessarily obliged to confine his experiments within the few days of each year during which nature furnished him with the green corn in the milk, upon which his trials were made.*

In this particular this invention was peculiar.

Ripe products of nature may be preserved at any time during the period of their ripeness, so long as they remain sound.

But to take any vegetable product at a particular stage of growth, and during its progress toward maturity, requires that

it shall be taken at that particular stage of growth, and also that all the danger of fermentation and putrefaction which results from the immature state of the vegetable, must accompany the experiment,

The nature of the article itself which the inventor sought to preserve, and the condition of growth or developement in which he desired to preserve it, were followed by two consequences.

1. That the operation should be promptly and speedily performed after the corn was taken from the stock.

2. The length of time or portion of the year in which this operation could be performed was very brief.

Defences.

There are four defences set up to the Bill in the Answer, and they are as follows:

1. That the Patentee was not the original and first inventor of the improvements described in the specifications annexed to the Letters Patent issued to him.

2. That the alleged improvements were old methods, applied to a new use, or a new thing merely, and that such methods were in public use before the alleged discovery of the Patentee.

3. That the alleged improvements were in public use and on sale more than two years before the Patentee applied for a Patent.

4. That the Patentee abandoned his invention to the public before he applied for a Patent.

These defences will now be considered in the above order.

It is admitted that these defences apply alike to both of the Patents, excepting perhaps the second defence which applies

more especially to the second Patent named, that is, the one on the process or method of preserving green corn; the first named Patent, as before remarked, being for the product, or Indian Corn preserved in the green state.

AS TO THE FIRST DEFENCE.

Citations from the testimony have hereinbefore been made, to wit: From the depositions of John W. Jones, William H. Sawyer and Andrew Mulnix, showing that the date of Isaac Winslow's invention was as early as 1841 or 1842.

This testimony will not again be quoted, but will be found on *pp.* 27, 50, 51 *and* 52, *Trans of Rec.*

It is now proposed to examine the depositions of witnesses introduced by the Respondents to support the first defence.

LOUIS BERTRAM.

Pp. 86 *to* 88, *Trans. of Rec.*

"*I was born in Langenberg, Prussia.* * * * * *Then I came to this country in* 1853, *and have lived here ever since.*"

Ans. 1, *p.* 87, *Trans. of Rec.*

"*In France we put up all fruits and vegetables raw, in cans; then we sealed them and cooked them in the cans* * * * * * *We commenced with asparagus, little peas, string beans, Lima beans, little carrots, corn, wheat, &c.*"

Ans. 2, *Trans. of Rec., p,* 87.

"*I packed some green corn in France, but not a great quantity there, but packed a good deal of green corn in this country,*"

Cross Ans. 1, *Trans. of Rec., p.* 87.

To this testimony the following replies are made:

1. The deponent never came to this country till 1853, the year in which Isaac Winslow filed his application for Letters Patent; so that all of his packing in this country must have been subsequent to this time.

2. Supposing the testimony to be perfectly true concerning his packing of green corn in France prior to 1853, it amounts only to the mere use of the invention in a foreign country, and it is well settled that the mere use of an invention in a foreign country, and unknown to the American inventor, cannot invalidate a Patent granted to an inventor in this country.

CHARLES MITCHELL.

Pp. 92 *to* 98, *Trans. of Rec.*

Int. "*When and where did you first preserve green sweet corn in hermetically sealed cans?*"

Ans. "*Eastport, in September of* 1843."

Trans. of Rec., p. 93, *Int.* 9.

In the next answer this witness says that it was "*in the latter part of* 1843 *or in* 1844 *commenced putting up green corn.*"

Ans. to Int. 10, *Trans. of Rec., p.* 93.

Further on the witness says in answer to an interrogatory, as follows.

Int. "*I understand that you had adopted the process of packing the corn into the cans raw, in the year* 1846, *as preferable to the others you name and to the exclusion of them.*"

Ans. "*I tried several processes and can't exactly recollect. I*

had adopted the raw system altogether then. I had dropped the others and adopted putting it up in its own milk."

Int. 50, *Trans. of Rec., p.* 97.

Some further reference will be made to this testimony hereafter, but for the present it is sufficient to observe that the witness does not set up a date as that of his earliest packing which is less than two or three years subsequent to the time when Isaac Winslow is proved to have made his invention, and while he is proved to have been in the yearly practice of it to bring it to perfection.

Upham S. Treat.

P. 99, *Trans. of Rec.*

Int. "*State whether or not Treat, Noble & Co., put up green corn in cans hermetically sealed, and if so, in what years?*"

Ans. "*We put up some corn at Eastport; a very small quantity at that time*—1842 *and* 1843; *it was a matter of experiment; had not been introduced into the market. I went on to Alexandria, D. C., and various cities, and found nothing of the sort, &c.*"

Int. 11, *Trans. of Rec., p.* 99.

Int. "*When did you commence putting up canned green corn at Treat's Island; how long did you put it up? &c.*"

Ans. "*In* 1848, *and continued to put it up until* 1856, *&c,*"

Int. 12, *Trans. of Rec., pp.* 99-100.

Int. "*State minutely the process by which you put up green corn in the raw or uncooked state at Eastport, and also Treat's Island, &c.*"

Ans. "*In putting up corn at Eastport, I cannot testify as to*

the precise process of putting up the corn, as Mr. Mitchell was the operator. I had the out-door business, what little there was done, and there was very little put up. I do not know the process of canning. In 1847 *on Treat's Island I commenced to operate practically myself, &c.*"

Int. 15, *Trans. of Rec., p.* 100.

(It should be observed here that the Mr. Mitchell referred to in this last answer is the Mitchell whose testimony is referred to just previous to Treat's, and that Mitchell does not leave it plain or certain whether he began to pack the cut kernels of corn into the cans in 1843, 1844 or 1846. See references to his testimony in this Brief.)

Int. "*Do you swear it was before the year* 1853 *that you did away with the previous boiling before putting into the cans?*"

Ans. "*I don't like to stick for a year so long ago, and I couldn't swear to it, but I think it was in* 1852 *that we gave up that process.*"

Int. "*Can you fix the date more accurately than above?*"

Ans. "*I packed by this process to the exclusion of this process, (previous boiling) as early as* 1853."

Cross-Ints. 1 *and* 2, *Trans. of Rec., p.* 101.

From the testimony of this witness it will be seen that he never began the process of preserving green corn himself till 1847 or 1848 at earliest, and he is not certain after all that it was earlier than 1853.

The packing referred to by him in 1842 or '43, at Eastport, Direct Int. 11, *Trans. of Rec. p.* 99, was not his packing as he

admits. Neither did he know the process pursued at that time.

But this packing was that of Charles Mitchell whose testimony has already been considered.

Further remarks will hereafter be made upon this testimony; but at present it is enough to say that Upham L. Treat's packing of green corn did not begin until four or five years subsequent to the date of Isaac Winslow's invention.

HENRY EVANS JR.

Trans. of Rec., p. 104.

Int. "*When and where did you first learn the art of preserving and packing hermetically sealed goods, and what kind of goods have you worked upon?*"

Ans. "*I first learned the art in New York in* 1847-8. *Think it was in* 1847. *We then packed green corn, string-beans, pine-apple, &c.*"

Int. 2, *Trans. of Rec., p.* 104.

Int. "*Have you ever applied said process to the packing and preserving of green corn; and if yea, when and where have you done it?*"

Ans. "*I have done it in New York in* 1848; *and think in Eastport in* 1848, *and in Portland, Maine, in* 1849."

Int. 6, *Trans. of Rec., p.* 105.

This testimony shows that the witness learned the art of preserving green corn at a time five or six years later than the date of Isaac Winslow's invention.

CHARLES J. UNDERWOOD.

Trans. of Rec., p. 108.

Int. "*When did you first become acquainted with the article of green corn preserved green?*"

Ans. "*In* 1844, *and possibly in* 1843.

Int. "*State the circumstances under which you first became acquainted with sweet corn so preserved.*"

Ans. "*To speak definitely, when clerk with my uncle, William Underwood; he ordered of Treat, Noble & Co., of Eastport, green corn packed in cans, and cut off the cob, in August,* 1844, *and received the articles so ordered during the fall of that year.*"

Int. "*When did the firm of William Underwood & Co. commence packing green sweet corn?*"

Ans. "*In* 1846 *or* 1847, *in Boston or Charlestown, Mass., It is possible that some was packed in Eastport, Maine.*"

Ints. 4 *and* 6, *Trans. of Rec., p.* 109.

Int. "*When will you swear you first packed any corn yourself?*"

Ans. "*In* 1849."

Trans. of Rec., p. 111, *Cross-Int.* 1.

From this testimony it appears that the witness can fix no date of the packing of corn in Boston, either by himself or his uncle, William Underwood, earlier than five or six years subsequent to the date of Isaac Winslow's invention.

AARON RING.

Trans of Rec., p. 118.

Int. "*Have you done anything in the preservation of corn in*

its green state; and if yea, when did you first do it; by what process or processes, and with what results?"

Ans. "*I have. I first did it in* 1850," *&c.*

Int. 4, *Trans. of Rec., p.* 119.

This, it will be seen, was seven years after Isaac Winslow made his invention as proved by the testimony of John W. Jones, William W. Sawyer and Andrew Mulnix, before referred to in Complainants' opening.

GEORGE F. LEWIS,

Trans. of Rec., p. 129.

Int. "*Have you among your other goods put up corn preserved green; and if yea, how long have you been engaged in putting it up, and by what process? Describe particularly.*"

Ans. "*I have, from* 1845 *to* 1865."

Int. 12, *Trans of Rec., p.* 129.

Int. "*When did you first preserve green corn in cans by any process?*"

Ans. "*In* 1846."

Cross-Int. 1, *Trans. of Rec., p.* 129.

Upon this testimony it is to be observed—

1. That the witness stated in the first instance above quoted that he first put up corn in 1845, and in the next answer but one, he stated that it was in 1846 when he first put up green corn.

2. Which ever year is correct it was at least three years subsequent to Isaac Winslow's invention; and this man put up corn

in Portland, as he says, within three miles of the spot where Isaac Winslow conducted his first successful experiment in 1842.

GEORGE BURNHAM, JR.

Trans. of Rec., p. 136.

Int. "*State whether you are acquainted with the process of puncturing and resealing as used under the Winslow Patent; and state when you first knew said process.*"

Ans. "*I am; I knew of it in the fall of* 1845; *the process of puncturing and resealing, as practiced by Lewis & Co., was precisely the same as that afterwards adopted by Nathan Winslow; and that practiced and known as the Winslow process, described in the Patents of Isaac Winslow.*"

Int. "*When did you first become acquainted with the process in putting up green corn in hermetically sealed cans.*"

Ans. "*In* 1847 *or* 1848."

Trans. of Rec., p. 136, *Ints.* 8 *and* 10.

ISAAC RECKHOW.

Trans. of Rec., p. 90.

This witness states as follows:

"*Prior to* 1849 *I put up corn in glass vessels, by steaming the corn on the cob, and then filling it into vessels, and sealing up the vessels air-tight. Continued this process for one year; and in* 1849 *I took the corn in its green and milky state, cut the kernels off raw, and packed the same into one-lb. tin cans, without water; soldered down the cap on top of the cans, to make them air-tight. I then put the cans into boiling water for two hours; removed them from the bath, and pricked a hole in the head of each can, so that the air rushed out; restopped the punctured cans with solder, and returned them to the boiling water, under a quick fire for*

two hours or more, when I immersed them in a bath of cold water, which contracted the cans, and the heads became concave."

It will be observed that this witness, although he began the business of manufacturing hermetically sealed goods in 1837 in the city of New York, never undertook the preservation of green corn until 1849—seven years after the date of Isaac Winslow's invention.

This testimony like all of the preceding, discloses a date several years subsequent to that of Isaac Winslow's invention in 1842, and it may be observed that this witness first learned of the art of preserving green corn at Portland, within three miles of the place where Isaac Winslow made his invention, and learned it moreover of Nathan Winslow, the brother of Isaac Winslow.

Reference has now been made to the depositions of every witness introduced by the Respondent to show the practice of the art of preserving green corn in hermetically sealed vessels prior to the date of Isaac Winslow's invention thereof in 1842, in this or in foreign countries; and it most clearly shows that none of these alleged practices of the art took place until two, three, and so up to seven years, after the date of Isaac Winslow's successful experiment in 1842.

Winslow's invention was made in the town of Westbrook, at a distance of about three miles from the city of Portland, Maine.

On that year, Isaac Winslow wrote from France to Caleb Jones, the father of the first named Complainant, to plant for him "a piece of ground with sweet corn."

Trans. of Rec., p. 27, *Int.* 4.

Prior to this date there is no proof upon the record that any

person in this country had attempted the preservation of any green corn at all.

To substantiate this, no reference to the testimony can be made except those hereinbefore; because there is no pretense in the testimony of any of the witnesses that any of them began the preservation of green corn in hermetically sealed vessels except at the dates given in the foregoing extracts.

Let it be remarked that none of these witnesses pretend to name a date less than one or two years later than the date proved as that of Isaac Winslow's invention in 1842.

That Isaac Winslow made his invention as testified to by John W. Jones, William W. Sawyer, and Andrew Mulnix, there is not an attempt at contradiction in the whole record.

The following statement shows the dates of the first packing of green corn by the several witnesses introduced by the Respondents:

LOUIS BERTRAM, *Trans. of Rec.*, *p.* 87, first packed corn in this country in 1853.

ISAAC RECKHOW, *Trans. of Rec.*, *p.* 90, first packed corn in 1849.

LOUIS BERNARD, *Trans. of Rec.*, *p.* 91, never put up any.

CHARLES MITCHELL, *Trans. of Rec.*, *p.* 93, first packed corn in 1843 or 1844.

UPHAM S. TREAT, *Trans. of Rec.*, *p.* 100, first put up corn in 1848 or 1852.

HENRY EVANS, JR., *Trans. of Rec.*, *p.* 105, first packed corn in 1848.

CHARLES J. UNDERWOOD, *Trans. of Rec.*, *p.* 108, first packed corn in 1849.

AARON RING, *Trans. of Rec., p.* 119, First packed in 1850.

GEORGE W. DAY, *Trans. of Rec., p.* 125, first packed corn in 1852 or 1853.

GEORGE F. LEWIS, *Trans. of Rec., p.* 129, first packed in 1846.

GEORGE BURNHAM, JR., *Trans. of Rec., p.* 137, first put up corn in 1854.

Of all of these witnesses who put up any corn at all, or who state that they put it up prior to the date of Isaac Winslow's application for Letters Patent, in the Spring of 1853, there is not one whose knowledge of the art cannot be traced to Portland, Maine, in the immediate vicinity of the place where Isaac Winslow made his discovery in 1842.

All of them, with the above exceptions, either did their first packing, or had it done in Maine, where Isaac Winslow first made his invention.

ISAAC RECKHOW says—

"*I was packing lobsters on Bang's Island, opposite Portland, (Maine) in the Summer of* 1849. *I left in August*, 1849, *and came to New York. I then put up six or eight or ten dozen cans of corn.*"

Seven years after Isaac Winslow's invention.

CHARLES MITCHELL first packed corn at Eastport, Maine, where the testimony shows a rumor had extended of a man in Portland who was putting up corn.

Upon this point, Samuel Rumery testifies as follows:

Int. "*When did you first become connected with or engage in the business of hermetically preserving corn?*" *&c.*

Ans. "*About the year* 1843, *in Eastport, with Treat, Noble & Co.*"

Int. "*When and where did you first hear of the process?*" *&c., &c.*

Ans. *I first heard of it in Eastport, by means of a man by the name of Baker, who was at work with me, and who had a brother in Portland. We had heard in Eastport of a man who was putting up corn in Portland by a new process. I first learned it practically in* 1848, *I think, in Westbrook, from Nathan Winslow. I had seen a sample of the corn packed in that way in* 1845 *when I came to Portland. It was shown to me by Nathan Winslow.*

Trans. of Rec., pp. 41 *and* 42, *Ints.* 3 *and* 6.

Jeremiah R. Ford who was at work with Treat, Noble & Co., at the same time with Rumery, testifies as follows upon this point:

Int. "*Was there any corn put up at Eastport up to the time you went up to Boston, by cutting off the cob in a raw state, filling into cans in that state, sealing and then bathing?*"

Ans. "*No. None of us knew anything about such a way. I think we heard while at Eastport of a man up to Portland who was putting up corn a new way. The amount of corn we put up was very small, a few cans only. I had charge of the preparing of it all, and knew all about it.*"

Trans. Rec., p. 152, *Int.* 7.

Thus it appears that Charles Mitchell was first down at Eastport, Maine, where Ford and Rumery say, they first learned that corn was being put up by a man in Portland.

UPHAM L. TREAT.

Ford and Rumery were employed by Treat, Noble & Co., and

Treat says that the first packing at that place was not done by himself, and that he did not know the process; but that it was done by Charles Mitchell.

"*Mr. Mitchell was the operator* * * * * * * *I do not know the process of canning.*"

Trans. of Rec., p. 100, *Int.* 15.

HENRY EVANS, JR., was in Eastport in 1848, and in Portland in 1849. "*Think in Eastport in* 1848, *and in Portland, Maine*, 1849."

Trans. of Rec., p. 105, *Int.* 6.

CHARLES UNDERWOOD lived in Boston, but *sent down* to Charles Mitchell at Eastport, Maine, in 1844, to have some corn packed.

Trans. of Rec., p. 109, *Int.* 4.

AARON RING lived and did his packing in Maine; Portland and Westbrook, in 1850.

Trans. of Rec., pp. 118 *and* 119, *Ints.* 3 *and* 4.

GEORGE W. DAY first learned of preserved green corn from Nathan Winslow, the brother of Isaac, the inventor. He first packed corn himself in 1852 or 1853, at Portland, Maine.

Trans. of Rec., pp. 124 *and* 125, *Int.* 2 *and Cross-Int.* 1.

GEORGE F. LEWIS both lived and did his packing in Portland, Maine. Did not begin packing corn till 1846.

Trans. of Rec., p. 129, *Cross-Int.* 1.

GEORGE BURNHAM, JR., lived and did his packing in Portland, Maine, but did not begin till 1854 or 1855.

It is a significant fact that all these alleged packings of green corn in hermetically sealed vessels, prior to the date of Isaac Winslow's *application for Letters Patent*, should thus seem to have started, and emanated from Portland to which Westbrook, the locality of Isaac Winslow's invention, is an adjoining town.

The testimony of Jean Louis Risioli Bertram only sets up a packing in this country in the year 1853. This of course must have been in August or September; because that is the season of the year only when the corn is ready for packing, and Isaac Winslow's application was filed in the Spring of the same year.

Trans. of Rec., p. 87, *Int.* 1.

A year or two after the Letters Patent upon which this suit is brought, were issued, John W. Jones, the Assignee, brought a suit v. Benjamin Thompson, et al., in New York for the infringement of the same. This suit, after some testimony was taken, was abandoned by Jones.

He gives this account of it—

Int. "*Have you at any time instituted legal proceedings against any parties for infringement of the Winslow Patent; and if so when, where, and against whom?*"

Ans. "*I have. Thompson & Totten of New York. Date not remembered.*"

Trans. of Rec., p. 34, *Cross-Int.* 88.

Int. "*Were these proceedings abandoned?*"

Ans. "*I withdrew my action.*"

Trans. of Rec., p. 34, *Int.* 89.

Int. "*State why you suspended this action.*"

Ans. "*I did not have the means to carry it on, or the time to attend to it properly.*"

Trans. of Rec., p. 36, *Int.* 13.

In this case thus brought and relinquished, Samuel Rumery, one of the original Complainants in this suit, gave a deposition which is to be found on *p.* 43 of the *Record.* This deposition was put in by agreement, and was used at the hearing on the Circuit to show a prior knowledge of the art of preserving green corn to the date of Isaac Winslow's invention. But it will be seen that the knowledge of the art which Rumery states he had, was only derived from Charles Mitchell and U. S. Treat at Eastport, Maine, with whom he was then employed.

Their testimony has been hereinbefore examined. The deposition of Rumery given in the present suit shows that this knowledge first came from Portland, as appears from his answer to the sixth interrogatory, *Trans. of Rec., p.* 42. a portion of which answer is as follows:

"*I first heard of it in Eastport by means of a man by the name of Baker, who was at work with me* * * * * * * *We had heard in Eastport of a man who was putting up corn in Portland* * * * * * * * * *I first learned it practically, I think in* 1848, *In Westbrook,*" *&c.*

This coincides exactly with his answer in the deposition in the former New York suit, where he says in reply to *Int.* 21, *Trans. of Rec., p.* 45:—

Int. "*When and where did you first know of the kernels of green corn being packed in tin cans and hermetically sealed for cooking and preserving the corn in the green state?*"

GEORGE BURNHAM, JR., lived and did his packing in Portland, Maine, but did not begin till 1854 or 1855.

It is a significant fact that all these alleged packings of green corn in hermetically sealed vessels, prior to the date of Isaac Winslow's *application for Letters Patent*, should thus seem to have started, and emanated from Portland to which Westbrook, the locality of Isaac Winslow's invention, is an adjoining town.

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This coincides exactly with his answer in the deposition in the former New York suit, where he says in reply to *Int.* 21, *Trans. of Rec., p.* 45:—

Int. "*When and where did you first know of the kernels of green corn being packed in tin cans and hermetically sealed for cooking and preserving the corn in the green state?*"

Ans. "*I practiced it myself in Westbrook, Maine, in that way in* 1848, *and I knew of it some years before.*"

Taking the two depositions together it thus becomes apparent that the hearing "of it some years before," was the rumor which had extended to Eastport concerning the man who was putting up green corn in Portland.

Both the depositions of Samuel Rumery, that is, the one in New York, and the one in the present suit, only serve to confirm the position that a person by the name of Baker carried to Eastport in 1843, the account of Isaac Winslow's preservation of corn near Portland, and that thereupon the same thing was attempted by Mitchell and Treat at that place. But it took U. S. Treat several years after that to work out the process (*see Cross-Int.* 1, *p.* 101) and required considerable experiment on the part of Mitchell who was an old packer of preserved goods. (*See Int.* 10, *Record p.* 93.)

Upon this point the Court, in giving the decision in the case in the first Circuit, observes as follows:

"*A careful scrutiny of the evidence given by those witnesses as to what was in fact done by the several deponents, will show that no one of them ever preserved any green corn in the mode of operation described in the specifications of the Patents, until the witness in some way and to some extent became acquainted with the process of the Patentee, either from rumor or from some one who had assisted the Patentee in making those experiments, and in most cases not until years after the invention was made, and in some cases long after the Patentee had filed his application for Letters Patent in the Patent Office.*"

Trans. of Rec., p. 170.

As to the Reliability of the Testimony of certain of the Eleven Witnesses of the Respondents to whom reference has now been made.

Thus far the testimony of these witnesses has been taken as if entirely without contradiction. It is now, however, proposed to show that the more important portions of this evidence are met with and subject to very grave contradictions.

Concerning the testimony of Isaac Reckhow, who states that after having been in Portland, Maine, in 1849, he then went to New York and put up a few dozen cans of corn, William H. Hudson says, *Record, p.* 89, that he went into company with Isaac Reckhow, under the style of Reckhow & Hudson, in the preserving business in 1864, and he further says "*Reckhow never told me while I was with him that he had ever packed any corn. This part of the business was left to me, and I gained a knowledge of it from Portland. In the year* 1864 *while with Reckhow, we packed five or six hundred dozen of corn,* * * * * * * *About one third of this corn spoiled.*"

Record, p. 89.

See on same page statement of James P. Baxter, concerning this testimony of Reckhow.

Concerning the depositions of Charles Mitchell, U. S. Treat, and Charles J. Underwood, J. R. Ford testifies as follows: (This witness, as before observed, worked at Eastport with Treat, Noble & Co., in 1845.)

Int. "*What was your duty or department of business at Eastport with Treat, Noble & Co.?*"

Ans. *I had to see that all the articles were properly prepared*

for packing. Then when packed to see the cans cleaned and painted," &c., &c.

Int. "*Was there any corn put up at Eastport up to the time you went up to Boston by cutting off the cob in a raw state?*" *&c., &c.*

Ans. *No. None of us knew anything about such a way* * * * * * * *I had charge of the preparing of it all and knew all about it.*"

Trans. of Rec., p. 152, *Ints.* 6 *and* 7.

After this he went up to Boston and Charlestown, between 1845 and 1850, and worked there with Underwood.

Int. "*Did you put up any corn at Boston or Charlestown?*" *&c.*"

Ans. "*If there was any put up there, it was put up in the same way as at Eastport.* * * * *This was in* 1849. * * * * *I had the preparation of the articles the same as at Eastport.*"

Int. "*Did you know Charles Mitchell at Eastport and Charlestown, and what was his part of the business at those places?*"

Ans. "*I knew him at Eastport. He was the foreman of the whole department, looked after the tin part, and soldering and bathing. His department was the same at Charlestown.*"

Int. "*How much corn was packed at Charlestown?*"

Ans. "*Very little. We were trying to get at a way of putting up corn, having heard that a man had done something of the kind at Portland.*"

In conclusion, it may be observed generally upon the testimony of these witnesses, that it shows if true—

1. The packing of green corn, and the preservation of it in hermetically sealed vessels, at periods of time varying from two to seven or nine years after the established date of Isaac Winslow's invention, and while he continued to prosecute his experiments.

2. In every instance of any alleged packing or experimenting by any of these witnesses, prior to the date of Isaac Winslow's application for Letters Patent, it discloses the remarkable fact that the first knowledge of such an art on the part of these witnesses was in some way, and by some means, derived from Isaac Winslow's experiments at Westbrook, near Portland.

3. None of them claim to have *invented* the process or the product, except Isaac Reckhow, who states that "*he was the inventor of hermetically sealed goods in this country, and could blow the Patent sky high. He said that he had invented tin cans.*"

Trans. of Rec., p. 89, *statement of J. P. Baxter.*

4. The more important portions of this testimony and those relating to dates anterior to Isaac Winslow's application, are contradicted, and appear to stand under grave imputation.

Certain documentary proof was introduced in order to substantiate this defence, (to wit, that Isaac Winslow was not the first and original inventor) and it consists of the following:

1. English Letters Patent to Peter Durand. Dated 1810. "Ex. No. H. L. H. U. S. C."

Trans. of Rec., p. 64.

2. English Patent to Henry Gunter, 1841. "Ex. No. 2, H. H. L. H. U. S. C."

Trans. of Rec., p. 66.

3. English Patent to Wertheimer. Dated 1840. "Ex. 3, H. L. H. U. S. C."

Trans. of Rec., p. 67.

4. English Patent to same. Dated 1841. Ex. No. 4, "H. L. H. U. S. C."

Trans. of Rec., p. 74.

5. Deft's Ex. C. Extract from Turner's Chemistry 1835.

Trans. of Rec., p. 147.

6. Extracts from Liebig's Chemistry 1841, Deft's Ex. D.

Trans. of Rec., p. 147.

7. Deft's Ex. E, Extract from Housekeeper's Friend, 1859.

Trans. of Rec., p. 148.

These will now be considered in the above order.

The English Patent to Durand was upon an invention communicated to him by a foreigner, and is undoubtedly the invention of Appert to which allusion has already been made; but a perusal of the specifications shows most conclusively that the process therein described could not by any construction be made to cover the invention of Isaac Winslow.

This Patent contains general directions for enclosing "*food or articles in bottles or other vessels of glass, pottery, tin, or other metals or fit materials.*"

It also prescribes closing "*the aperture of such containing vessels so as completely to cut off, and exclude all communication with the external air.*"

"The specifications further state that "*vegetable substances are to be put into the vessel in the raw or crude state, and animal substances partly or half cooked,*" *&c.*

It further specifies that when the vessels have been filled with the articles to be preserved, they are placed "*in a boiler.*" * * * * "*and I fill the said boiler so as to cover the vessels with cold water which I gradually heat to boiling, and continue the ebulition for a certain time which must depend upon the nature of the substances included in the vessels.*"

These extracts present all the parts of this specification essential to be noticed.

These directions are very general in terms and come very far short of affording a guide to the preservation of green corn.

Following the directions of this Patent, we should have no statement of the necessity of cutting the kernels from the cob. We should have no direction as to whether the corn were to be preserved in the ripe or green state at all, or that corn itself was to be preserved at all.

As has been before remarked the great and indispensable step in the preservation of green corn is, the removal of the kernels from the cob in such a condition, as to maturity, and state of being cooked, that when so severed the juice will to a certain extent exude from the kernels and surround them.

If the corn is ripe so that its juices have become concrete, or if the corn is green but completely cooked before cutting from the cob, so that the juices are coagulated and will not flow out, then the great direction in the Winslow Patents is not complied with.

For the purpose of showing more clearly that the Durand Patent in no way supersedes the invention of Isaac Winslow, more particular reasons for the cutting of the kernels from the cob will be given and supported by the testimony.

It has already been observed that the cooking of the kernels before they are placed in the closed cans, involves the loss of the flavor and the aroma of the cereal; and the same would be

the case if it were practicable, to remove the tender milky kernels of green corn in a whole or unbroken state from the cob, and in that condition place them in the cans. This latter example will serve to illustrate conclusively that in order to insure a good article the kernels must be cut from the cob, and must be put into the cans in a broken condition.

If the kernels were put into the cans in the whole state as supposed, sealed up, and submitted to the hot bath, the result would be a tougher, more stringy condition of the kernel than when taken from the cob.

By the application of heat to the whole kernel in the can, a sort of artificial ripening process would, to a certain extent, go on.

Heat is the natural agent by which the maturing of the kernel is produced.

We should observe that when the kernels are placed unbroken in the cans, all the component parts of the same are in their natural relations, and occupy their natural positions toward each other.

They are also in the natural chemical relation toward each other to promote the process of ripening. Therefore when heat is applied to these kernels, (in a natural condition in all respects), it first has the effect to induce a partially ripening process within them, and thus when they are cooked they are not strictly cooked kernels of tender green corn; but they are toughened, more stringy, or in other words, the proportion of woody innutritious fibre in them is increased from what that proportion was when taken from the cob.

But when the tender kernels in the milk are cut from the cob so that the juices have an outflow from the cells of the kernels, the constituents of the kernels no longer occupy their natural relative positions to each other.

Therefore the tendency to ripening when heat is applied to the cans, is arrested, and the effect of thé heat then is only to coagulate these juices, (the albuminous compounds of the corn) and fix them in the best state for preservation. And the corn thus cooked is preserved green corn, or corn at the same stage of growth as when taken from the cob.

It is plain that the maturing process cannot go on when the natural relations of the constituent elements of the corn have been disturbed.

But if the kernels were placed in the cans intact, it is apparent that this natural relation and position of the elements of the kernels would not have been disturbed.

These remarks serve to illustrate that the severing of the kernels in removal from the cob, is indispensable to the preservation of corn in the green state.

An inspection of the Durand Patent will show that it could not ever have anticipated the preservation of green corn; from the fact that this important step, with all its attendant consequences, is wholly omitted therein.

It is true that it specifies the placing of the articles in the cans in the "*raw crude state*," but it wholly fails to point out the necessity of so manipulating the articles to be preserved that when placed in the cans they are so preserved in a bath of exudations from themselves. It refers to no articles which require such treatment, because it does not refer to any articles at such a stage of growth or immaturity that the arresting of the progress to ripeness is essential to preserving the article in the desired state.

These views are fully sustained in the opinion of the Court, in the following language:

"*Next the Respondent insists that the process described in the English Patent to Peter Durand supersedes the invention of the*

assignor of the Complainant as a prior discovery and for the same improvement. Vegetable substances intended to be subjected to that process, the specification states, are to be put into the vessels selected for the purpose, in the raw or crude state; but the Patentee, in enumerating the articles to be preserved, does not mention green corn, nor does he state whether the kernels are, or are not, to be removed from the cob, or, if to be removed, whether the removal is to be effected in a manner to leave the kernels UNBROKEN, *or by means of a gauged knife, as in the mode of operation described in the Complainants, Patent, nor is any mention made of preserving green corn, or any other vegetable substance,* IN THE NATURAL JUICES OF THE ARTICLE, *as in the mode of operation set forth in the patent mentioned in the bill of complaint. Instead of packing the kernels in the vessels selected for the purpose, in their crude state, as suggested in the English Patent, the process patented by the assignor of the complainant directs that the kernels should be cut from the cob, in a way which leaves a large part of the hull on the cob, and breaks open the kernels, liberating the juices, to use the language of the Patentee, and causing the milk and other juices of the corn to flow out and surround the kernels, as they are packed in the cans in such a mode that the juices form the liquid in which the whole is cooked, when the cans are subjected to the bath of boiling water."*

Prof. Hayes says concerning green corn itself, as follows:

"*Green sweet corn is a peculiar substance, differing materially from any other cereal, seed, fruit or vegetable used as food. Its composition and structure are such that it is singularly susceptible to fermentative decompositions and changes, more so than any fruit or vegetable that has been successfully preserved in hermetically closed packages for any considerable length of time. Its liability to rapid change is not due to any particular constituent, but*

to the presence of such substances as gluten, sugar, fat, and starch, together, and in proportions best adapted for fermentation and action upon each other. Its peculiar flavor, other than its sweetness is contained in and associated with the fat or oil present, and very slight fermentations of the other constituents are sufficient to destroy it. Kernels of sweet corn as compared with peas, for instance, are much more delicate and liable to change; they contain a much larger proportion of milk, juice or sap, which itself contains more sugar, starch and fat, than the juice of sweet peas, and the glutinous or nitrogenous constituent which acts as the ferment or primary cause of change, is much more active in the juice of sweet corn than in that of sweet peas."

Trans. of Rec., p. 60, *Ans.* 7.

In speaking of the cutting of the kernels from the cob, so as to permit of a portion of the juices of the kernels to exude from the same, this witness says as follows:

"*The whole success in preserving sweet corn depends upon this cutting open, or breaking of the kernels, before they are put into the cans for cooking; and I consider this as the distinguishing feature, and one of the most essential parts of the Winslow process. But in the Durand Patent * * * * * this important part of the process has been entirely overlooked, and in the specification it is expressly stated that 'vegetable substances are to be put into the vessel in the raw or crude state; and it would be impossible to cook green corn in the raw or crude state by following the directions of Durand's Patent, and obtain any result nearly so nutritious or good as that obtained by cutting open, breaking and separating the kernels from the cob, and preserving only the kernels as in the Winslow process; because when green corn is heated in its raw, crude state or on the cob, especially if in a closed or nearly closed can, it undergoes a boiling or digesting process, during which the*

porous cob absorbs most of the juice or milk from the kernels, and if heated sufficiently long, the cob itself will become nearly as sweet, and flavored like the kernels, the latter becoming equally tasteless. But when the kernels that have been cut open, broken and removed from the cob, are heated in closed cans, the juice or milk partially exudes from the kernels, surrounding each and all of them in a fluid in which they are cooked, and this fluid, being coagulated by the heat, preserves the mass from fermentation and change," &c.

Trans. of Rec., p. 61, *Ans.* 10.

In speaking of the result upon the manufactured article, if the kernels had not been cut so as to release the juices, the witness says as follows:

"*The difference between cutting the corn from the cob, releasing the juice from the kernels by so doing, then packing it in cans for preserving* WITH THE JUICE AND MILK, *and between boiling, either on the cob or off the cob, before putting into cans, becomes very apparent in the finished preserved article. All the sugar, starch, gum and oil (including flavor) are present in that preserved in the juice; while that which has been first boiled, contains much less of all these valuable constituents, which would be boiled out, while the proportion of insoluble and innutritions fibre is increased and left in the corn.*"

Trans. of Rec., p. 62, *Ans.* 13.

And in speaking of that preparation of the corn before canning, which would occasion a partially ripening effect upon the corn, so that when eaten it would be not green corn but something else, he says as follows:

"*It would lose more or less of its flavor, become dry, and thus comparatively tasteless, from the drying and hardening of the starch and gluten about and within the kernels.*

Green sweet corn, if prepared by following the process described in Durand's specifications, would be on the cob, comparatively hard, and devoid of nutritious valuable juice, while that preserved by following the directions of the Isaac Winslow Patents, would be kernels of corn cut open, soft, sweet, juicy and containing all the constituents originally present."

Trans. of Rec., p. 62, *Ans.* 14 *and* 15.

The deposition of S. P. Sharples, Expert for Respondents, is to be found beginning on *p.* 142 of the *Record.* But it is sufficient to say that there is no attempt in the whole of his testimony to contradict the propositions of Prof. Hayes, above quoted from his deposition.

Upon this it is then only necessary to say, that if green sweet corn is a peculiar substance, if it is difficult, and more difficult to preserve than any other, if the cutting of the kernels from the cob so as to permit the outflow of the juices is essential to the preservation of green corn, if without this step it would become dry, insipid, stringy, and comparatively innutritious, then in the absence of any specific directions in the Durand Patent to so treat the kernels, it is urged that manifestly the Durand Patent is not an anticipation of the Winslow invention, and is not applicable to green corn.

Further light will be shown upon the construction of the Du rand Patent by the following testimony:

"*It* (the Patent) *is dated in* 1810, *at a time when sweet corn was not used in England.*"

Trans. of Rec., p. 62, *Ans.* 4.

Thus it is apparent that the Durand specification was written without any reference whatever to green corn, and probably without any knowledge of it, which fact explains why the

necessary step toward the preservation of green corn is not to be found described in the Durand specifications.

It is now insisted that so far as the testimony of the eleven witnesses before referred to for Respondents, and the Durand specifications are concerned, they all utterly fail to show, prior to the date of Isaac Winslow's invention, this cutting of the kernels from the cob at such a condition of the kernel as to permit of the exudation of a portion of the corn juices for the purposes described, which is proved to be an indispensable step in the preservation of green corn in hermetically sealed vessels.

The Gunter and Wertheimer Specifications.

Pp. 66 *and* 67, *Trans. of Rec.*

Concerning these two specifications it is not considered necessary to say much, because they are, like the Durand specifications, wholly deficient in any reference to green corn, or to the essential step in the preservation of that article.

The Gunter specification provides, after the articles have been placed in the hermetically sealed vessels, and submitted to boiling water for a given period of time, and after being removed from such bath, as follows:

"*I puncture therein a minute hole, and heat being kept up to insure its being above two hundred and twelve degrees of Fahrenheit, the air in the case or vessel will be driven out with the steam, and when it is seen that the steam is coming very freely I close the minute hole by a soldering iron whilst the steam is flowing off and in opposition thereto. The process will then be complete, and it may be remarked that by pursuing this process, great advantages will be derived, as it will be evident that by causing the process of heat to be carried on during the time the vessel is hermetically*

closed, all the flavor of the substances treated will be retained, and the vessels will only be open so long as simply to allow of the air being driven off; from which circumstances the animal and vegetable substances will be preserved in the most advantageous manner."

Trans. of Rec., p. 66.

The specifications of WERTHEIMER, *Trans, of Rec., p.* 67, as modified by his disclaimer, which is the marked lines *pp.* 72 *and* 73, describes and claims a method of expelling the air through the top of a partially closed vessel, and also for decomposing what air may remain in the hermetically closed vessel after the apertures in the top thereof have been closed.

Like the two preceding specifications, however, it lacks any mention of the preservation of green corn, and is entirely wanting in the essential step upon which the Patents of Isaac Winslow, lay so much stress, and which have been so clearly explained in the evidence of Prof. Hayes.

DEFENDANTS' EXHIBIT C.

Trans. of Rec., p. 147.

The following extract from this Exhibit will be all that is necessary to show that it has no application to the process described by Isaac Winslow for the preservation of green corn.

[Extract from Turner's Chemistry, 5th Am. from 5th Lon. Ed.; Philadelphia, 1835, sec. 7, pp. 635-6.]

"*It is probable that when moisture and warmth occur, putrefaction in amimal matter which has not been heated to* 212°, *will take place independently of atmospheric influence. But when animal matter has been boiled, and is then without subsequent exposure, completely protected from air, it may be preserved for years, even*

though moist and in a temperature favorable to putrefaction. The practice of preserving every kind of food, both animal and vegetable, now a subject of extensive commercial enterprise, affords ample demonstration of this statement. The mode generally adopted is the following: Into a tin vessel is placed any kind of food, such as joints of meat, fish, game and vegetables, dressed for the table; and into the interstices is poured a rich gravy, care being taken to have the vessel completely full. A tin cover, with a small aperture, is then carefully fixed by solder; and while the whole vessel is perfectly full, and at the temperatvre of 212°, *the remaining aperture is closed.*"

DEFENDANTS' EXHIBIT D.

Trans. of Rec., p. 147.

This is an extract from Liebig's Chemistry, and by reference to the experiments of Guy Lussac, proves that the oxygen of the air is an active agent in effecting changes of organic substances.

The invention of Isaac Winslow is founded upon that theory, and, in his claims, he does not pretend to be the discoverer of the necessity of the expulsion of the air from the hermetically closed vessel.

Neither does he in his specifications claim to be the inventor of the preservation of any kind of food except green corn.

This Exhibit may therefore be passed without further remark.

DEFENDANTS' EXHIBIT E.

Trans. of Rec., p. 148.

Upon this it is not necessary to say anything.

All the testimony has now been reviewed which can properly be considered as in any way relative to the first defence set up by the Respondents, and it is submitted that it wholly fails to show that Isaac Winslow was not the original and first inventor of the improvements described and claimed in his specifications.

AS TO THE SECOND DEFENCE:

That the several supposed improvements are merely old methods applied to a new use, and that the several improvements, and each of them, were well known and in public use prior to the alleged discovery and invention of the Patentee.

This defence has probably particular relation to, and is founded upon the Durand Patent, to which extended reference has already been made.

But that this defence cannot be sustained, is apparent from the facts already shown in the previous discussion upon this Patent and which may be stated as follows:

1. Green corn was not known in England at the date of that Patent.

2. The specifications are wholly lacking in the mention of that step in the process which it is not denied by the Respondents, is indispensable to the preservation of green corn.

3. It is suited to the preservation of the coarser vegetables (as Prof. Hayes says), but is not adapted to a cereal so subject to fermentative change as green corn.

4. It does not mention any article in the immature state at all.

Under this defence no remarks will be made upon the Gunter

and Wertheimer specifications, or the other printed Exhibits introduced by the Respondents.

It is deemed to be so plain that, if the Durand Patent is not held to anticipate the Winslow invention, the other two Patents cited cannot, that no discussion of them except what precedes will be attempted.

A few general observations under this defence.

Winslow aims to pack corn *in its own juices*, not to pack anything with its juices *in it*, as did Durand. So to commence with, Winslow does not put the corn into the cans in a "*crude state*," but he first *cuts the kernels from the cobs*, "breaking them open" with the view to liberate the juices and allow them to flow out of and around the. Why? In order that the subsesequent application of heat, while it coagulated the juices, and fixed them in a state to prevent fermentative change, it at the same time would not toughen the corn, would not augment the proportion of woody innutritious fibre in the kernels, but leave them, when cooked, tender, juicy and nutritious.

In this cutting from the cob, the inventor had in mind the operation of certain chemical laws, consequent upon the application of heat to the article. When the kernels have been removed from their natural position, and changed from their natural condition with a view all the time to a certain chemical action, dependent upon that new condition, it would be difficult to say that *that* condition was the "crude" or natural state of the corn.

By "crude" in the Durand Patent, I do not understand *only* raw; it means also the same as we intend when we use that adjective as follows: Crude camphor; crude petroleum, &c.

Therefore crude corn would mean corn on the ear or unshelled; and if Durand had specified a *green* crude cereal, it would have covered green corn on the ear.

Now it is not denied that putting up corn on the cob wholly destroys its desirable quality. It is not necessary to cite from the evidence on this point. The Patents state the fact, the Complainants' witnesses reiterate it, and the Respondent does not attempt a denial.

No attempt is made to deny that this severing from the ear and rupture of the kernels is indispensable.

Then if the Durand Patent does not with sufficient particularity point this step out, it does not embrace the great essential step in the Winslow process; and if my definition of the word *crude* in this connection is correct, then the specification points out a process which is precisely what cannot be used in preserving green corn.

Winslow cut the kernels from the cob, breaking them open, thereby saving the juice, put it with the kernels into cans, sealed them up, and then fixed and coagulated the elements by heat. He then vented or punctured the cans to relieve the strain on them, which strain is consequent upon the expansive force of heated air, gases, and watery vapor, created by the external heat applied to the cans.

The oxygen contained in the cells of the kernels, and the interstices between the kernels as they lie in the cans, is liberated by heat, and being light rises to the top of the can. This is the agent which accelerates putrefaction, and must be eliminated. Venting allows the escape of this also.

It is strange if full directions for packing green corn were to be found in the Durand specification (date 1810,) that Lewis, Underwood, Burnham, Winslow, Rumery, Ring, and Mitchell, *had to experiment or learn the process from Isaac Winslow* before they could successfully pack green corn.

Why, if such information is in the Durand Patent, (and some of them say they are familiar with it from an early date) were

long trials, direct or indirect information from Isaac Winslow necessary to enable them to produce this article?

As to the Third Defence.

That the several improvements were in public use and on sale more than two years before the Patentee made his application for a Patent.

The first witness of Respondent that says anything applicable to this defence, is—

Stephen H. Provost.

Trans. of Rec., p. 91.

"*In* 1848 *or* 9 *we found corn preserved green, in market for sale, and about this time we had a consignment for sale on commission, two or three casks, of the 'Winslow corn' so called; since which I have had and dealt in said corn, at various times up to the present, both from Nathan Winslow in his life-time and John W. Jones since.*"

On *p.* 92, the same witness qualifies this as follows:

"*The first corn preserved in a fresh state in hermetically sealed cans, seen by me, was exhibited by Nathan Winslow at my place of business in New York, about the year* 1849. *I am not positive that the two or three casks of Winslow corn alluded to in a former deposition as being consigned to me by said Winslow, was precisely in the year* 1849," *&c.*

George W. Day.

Trans. of Rec., p. 124.

"*I have found the Winslow corn in the market for sale; I*

think it was in the year 1851 *or* 1852 *that I first saw it; it was in very small quantities; don't remember how it was labelled, but think it was labelled Nathan Winslow."*

SAMUEL S. PIERCE.

Trans. of Rec., p. 126.

"*I am acquainted with Nathan Winslow, but not with Isaac Winslow. I have met Nathan Winslow as often as three or four times a year for fifteen years previous to his death. For many years I knew no canned goods but those of Mr. Winslow. I purchased* OF NATHAN WINSLOW *preserved green corn of* HIS *preparation, until he died.*" * * * * * * *

"*It was in two-pound cans and bore a printed label having these words:* PREPARED SWEET CORN, BY NATHAN WINSLOW, PORTLAND, MAINE."

"*I never knew that Isaac Winslow had anything to do with preserved corn.*"

Trans. of Rec., pp. 126, 127.

Int. "*Did you ever buy any corn of Isaac Winslow or any bearing his name?*"

Ans. "*No, sir.*"

Trans. of Rec., p. 127.

GEORGE BURNHAM, JR.

Trans. of Rec., p. 136.

Int. "*State whether you knew of Nathan Winslow's putting up green corn,*" *&c.*

Ans. "*I did.*"

Int. "*Do you know what Winslow* (i. e. Nathan) *did with the corn put up by him in* 1847, 1848?"

Ans. "*I do. It was sent by him to market.*"

Same p., Int. 12.

Int. "*Did your ever know of Isaac Winslow's preserving green corn?*"

Ans. "*I never did.*"

Int. "*Did you ever know of Isaac Winslow's having given his consent to any one to preserve green corn according to the Winslow process for him?*"

Ans. "*I have not.*"

Before calling attention to any counter proof on this branch of the case, let us see what the testimony really amounts to.

Stephen H. Provost is not certain of his date.

Samuel S. Pierce testifies in all to one hundred and one dozen cans, before March 8, 1851, which was two years before Winslow's application in 1853, for Letter's Patent.

They were trial sales at Pierce's request, (*Trans. of Rec., p.* 127, *Int.* 4) to see if the article was saleable.

Geo. Burnham, Jr., says corn was sold in 1848; no amount given. No circumstances accompanying the alleged sale.

Geo. W. Day found some corn in the market in New York in 1851 or 1852. Winslow's application was in March, 1853.

Now these are all the sales of alleged Winslow corn that the defence have succeeding in proving.

1. It was all sold by NATHAN WINSLOW and bore his name upon the labels.

2. It is not shown that Isaac Winslow knew of it at all. No intimation is given that Isaac Winslow had any notice that corn was being sold, even in such small quantities by his brother Nathan.

3. Isaac lived in Philadelphia and only came to Westbrook in the corn season four or five days each year.

4. The testimony does not show by what process the corn sold was preserved.

Reference will now be made to some countervailing proof upon this question.

It is clearly shown that these sales must have been made privily—without the inventor's knowledge, in opposition to his expressed wishes, and in violation of hisconfidence.

Speaking of what corn Isaac Winslow packed, Jones says as follows:

Trans. of Rec., p. 32, *Int.* 69.

"*Was this corn put upon the market at any time after the year* 1847 *and up to the year* 1852*?*"

Ans. "*Prior to the application for a Patent, I know of no corn being put upon the market (because I had frequent conversations with Isaac Winslow, and he was perfectly aware of the fact that he was not allowed to place it on the market except at a certain time before the date of his application.)*"

And Sawyer, *Trans. of Rec., p.* 50, *Int.* 10.

"*State the circumstances of his giving it* (i. e. the corn) *to you.*"

Ans. "*He* (i. e. Isaac) *gave me the corn to eat, saying he did not intend to sell any.*"

And Whittier, *Trans. of Rec., p.* 150, in answer to *Int.* 5, says—

"*He did not to my knowledge; I know he was strongly averse to sales or* PUBLIC *disposal of his corn until after he had made application for a patent, which he always proposed to do. Am sure he knew of his legal rights and liabilities as an inventor. Nathan Winslow was desirous to offer some of the corn for sale in the market, but am confident he obtained no permission from Isaac; more than once Isaac refused to have any corn sold.*"

And in answer to *Croos-Int.* 5 says—

"*I have every reason to suppose he did not know. I know that he was opposed to all sales until he had perfected his process. He was only a few days at Westbrook during the corn packing season. I cannot tell how much Nathan may have sold privily, but I am sure there was no general business; there was not enough packed.*"

And in answer to *Cross-Int.* 6, he says—*Trans. of Rec., p.* 151—

"*Isaac considered himself an inventor, intending to get a Patent, and that he was not engaged in the manufacture of what he invented.*

Jones was nephew and confidential friend of Isaac. Sawyer was employed by Isaac in his private experiments at Westbrook, and Whitten was the confidential clerk of Nathan from 1842 to 1852.

These witnesses are as well qualified therefore to testify upon this point as any that could well be found.

Nathan and Isaac Winslow had no business connection.

Trans. of Rec., p. 151, *Int.* 4.

"*I know that Nathan Winslow never pretended to or claimed*

any agency prior to 1852, * * * * * * *I think I saw all Nathan's business papers from* 1842 *to* 1852, *and I am sure there was no written permission for Nathan to sell the packed corn, from Isaac, and I have several times heard him refuse Nathan's request for permission to sell even very small quantities.*"

Trans. of Rec., p. 150, *Ans.* 2.

"*Was on intimate and confidential terms with both Nathan and Isaac Winslow, and knew about their business nearly twenty years.*"

Ans. 3. "*I never knew of any business connection between them. They were brothers, but not associated in business.*"

Ans. 4. "*Nathan Winslow had no business connection with Isaac in this,* (*i. e.* putting up corn.)

The corn put up by Isaac Winslow is fully accounted for.

Trans. of Rec., p. 29, *Int.* 14.

"*What was done with the corn packed in that year?*"

Ans. "*I think it was put into Mr. Winslow's store on Union Wharf; Mr. Nathan Winslow's store; in the attic of the store. I am not sure about the disposal of that year's corn, there was so very little of it, and a large portion of it spoiled before it could be moved at all.*"

This was in 1842.

Trans. of Rec., p. 36, *Int.* 14.

"*State where the corn packed by Isaac Winslow from* '42 *or thereabouts to* '49 *was placed?*"

Ans. "*The first of it was placed in Nathan Winslow's store, in the attic, on Fore Street, and when Mr. Winslow moved, it was*

moved to Union Wharf. A portion of it was in an outbuilding that they used at Congin for packing corn. I have seen some of it there in the attic within a year, I think, and I have seen, in years gone by, that at Congin."

Trans. of Rec., p. 40, near bottom.

"*The product of two or three years' packing, prior to* '52, *was stored in a building on Union Wharf, Portland, and remained there for many years, till a recent date, and I think some may be found there now. Of this, some was sent and given away, but the method was not sufficiently sure to warrant making the corn a marketable article at those times.*"

Trans. of Rec., p. 150, *Ans.* 1.

"*Most of the corn was stored.*"

P. 151, *Ans.* 6.

"*As I have already stated that it* (the corn) *was mostly stored first on Fore Street, and then on Union Wharf, in Portland.*

Thus the evidence in the case most conclusively shows, that not only was the inventor, Isaac Winslow, wholly ignorant of the sales, if any, by his brother Nathan, but that he was opposed to them, that they were made against his expressed wish, and that all which he himself packed was carefully stored in places where it has been seen by living witnesses at a very recent date.

It is, therefore, confidently submitted that the defence, that the alleged improvements were in public use and on sale with the knowledge and consent of the inventor, is not made out.

In leaving this branch of the case, attention is called to the

fact that all the dealers or grocers called by the Respondents testify that the first Green Corn they ever heard of was *Winslow Corn.*

Also, the earliest experiments made in this country, upon the preservation of green corn, so as to maintain the immature condition of the corn when, and after, it was preserved, were those of Isaac Winslow.

As to the Fourth and last Defence which is, that the Inventor abandoned his invention to the Public.

Isaac Winslow made his invention in 1842.

He applied for Letters Patent in 1853.

Patents issued in 1862.

An interval of eleven years from the date of his invention to the date of his application.

An interval of nine years from the date of his application to that of his obtaining a Patent.

This plea of abandonment is probably founded upon the lapse of time indicated in these two periods. First, the one preceding the application. Second, the one preceding the issue.

Attention is first called to the period between the proved date of the invention and the application for a Patent—1842 to 1853.

In his attempt at preserving green corn, the inventor was dealing with an *annual product of nature.*

He could not pack any green corn in the winter, spring or early summer, simply because there was *none to pack.*

This is not the case of the inventor of a *machine*, who only

needs tools, wood and iron, and then, shutting himself in his shop or factory, can work day and night, without cessation, until the thing is complete. It is not the case of the chemist, to whom the labratory furnishes every chemical agent and implement, in summer or winter. In such cases (notwithstanding the instances where tardy invention founded on first experiment has been sustained by the Courts) a delay of ten years might be too long, unless explained.

But such was not Isaac Winslow's case. His was a peculiar one. He was treating an article of vegetable growth, and *in that stage of growth*, which nature furnished only a few days in each year. He had to deal with the product then or not at all.

Isaac Winslow's idea was to take an annual product of nature at a certain stage of its developement, and, arresting further developement, provide for its preservation, in that state, for years afterwards.

To do this he was compelled to take the green corn in the milk, in its season, and he could not have it at his hand any longer.

The testimony of experienced packers, on the record, furnishes the means of making a very nearly exact computation of how much time the inventor was *actually at work* packing corn during the years named.

To this evidence — important as it is — there is no contradiction.

How long in each year was the inventor able to experiment upon green corn?

JOHN W. JONES, an extensive packer, says as follows:

"*When green corn is in the milk, how long is it fit for packing?*"

Ans. "*Very few days—less than a week.*"

Trans. of Rec., p. 36, *Int.* 7.

Andrew Mulnix says he was out at Westbrook with the inventor "*five days. One of those days was Sunday.*"

Trans. of Rec., p. 52, *Int.* 8.

U. S. Treat, witness for Respondent, says as follows:

Int. "*How long will green corn in the milky state so retain the juices after plucking,* THAT THEIR JUICES WILL FLOW?"

Ans. "*Four days, if kept cool.*"

Trans. of Rec., p. 102, *Int.* 21.

J. P. Baxter, a very extensive packer, says as follows:

Int. "*How long does the proper state or condition for packing according to the so called Winslow process, as above described, of a single crop of corn continue?*"

Ans. "*When corn is in a proper state for canning, it remains so but a short stime, two or three, or three or four days at most.*"

Trans. of Rec., p. 158, *Int.* 12.

Int. "*State how much corn you have preserved by the so called Winslow process,*" *&c.*

Ans. "*Upwards of five million cans.*"

Packers now arrange for a succession of crops, and plant early, late, and medium seed, so as to extend the time of packing.

"*Please state how you are enabled, if such is the fact, to prolong a packing season for several weeks.*"

Ans. "*We arrange for a succession of crops, first by having several grades of seed, early, medium and late, planted at different times, so as to have successive crops, extending over a period of several weeks.*"

Trans. of Rec., p. 158, *Int.* 13.

This is the result of the great demand for this article which has grown out of Isaac Winslow's invention.

Having then, as this inventor did, only about four days in each year in which he could possibly treat this article to see if

it could be preserved, it is apparent that out of the eleven years from 1842 to 1853, he had only about *forty-eight days of actual experiment.*

But he had further difficulties to encounter.

The preservation of green corn was unknown when Isaac Winslow was prosecuting his experiments.

This article (corn) required very strong cans.

In consequence of the state of the article when placed in the cans, it strained the cans very much during the immersion in the hot bath.

Tin workers did not understand the necessity of making the cans unusually strong, did not know how so to make them, and consequently many of them burst and the preserved article was lost.

The inventor was obliged to wait until the method of making the cans sufficiently strong was learned.

Before this he could not determine whether the loss resulted from the imperfect cans, or from some defect in his process of preservation.

"*Consequently strong cans are required, and dealers are likely to be prejudiced against corn thus put up.*"
First Patent, Trans. of Rec., p. 4.

"*The cans should be very strong to prevent their bursting by heat.*"
Second Patent, Trans. of Rec., p. 6.

Such were the statements of the inventor in 1853, (after the completion of his experiments), in his Patents.

The testimony, on both sides, shows this more clearly.

JOHN W. JONES, speaking of Winslow's experiments in 1842—

Trans. of Rec., p. 28, *Int.* 5.

"*I had frequent conversations with him, but he was established in the principle of packing corn. His experiments were confined to the mechanical part.*"

Same witness on cross.

Trans. of Rec., p. 30, *Int.* 37.

"*If the corn was packed in the same manner as in* 1842, *how do you explain the fact that it kept better?*"

Ans. "*I attributed it to his having a better knowledge of the mechanical part of it in* 1844 *than in* 1842."

Also,

Trans. of Rec., p. 35, *Int.* 3.

"*In your answer to the* 12*th*, 27*th*, 34*th*, 36*th and other cross interrogatories, you do state that a portion of Mr. Isaac Winslow's corn packing from* 1842 *to* '49 *was in each year partially unsuccessful. State in what particular.*"

Ans. "*In the mechanical parts, I mean. The cans were very imperfectly made.*"

WILLIAM H. SAWYER, *Trans. of Rec., p.* 51, *Int.* 1.

"*He* (*i. e.* Winslow) *wanted me to get up some quicker way of getting up the cans, and to save solder.*"

Andrew Mulnix, *Trans. of Rec., p.* 53, *Int.* 1.

(Mulnix is a tin-worker.)

"*Please state the condition of the art or knowledge of making cans.*"

Ans. "*The cans were made under Mr. Isaac Winslow's direction. He wished them strong to bear the pressure.*"

Upon this subject the following is from Respondents' testimony:

U. S. Treat, *Trans. of Rec., p.* 101, *Ans.* 15.

"*I resorted to this method chiefly on account of the weakness of the cans, and also because we were thus enabled to remove the hulls.*"

Same witness, *Trans. of Rec., p.* 102, *Ints.* 29 *to* 31.

Int. "*What was the improvement you finally made in the cans, so that they were made stronger in* 1852?"

Ans. "*We doubled seamed the cans, and then soldered over the seam.*"

Int. "*What proportion do you think was lost by explosion before that time?*"

Ans. "*From six to twelve out of one hundred would open and strain in the first bathing.*"

Int. "*Why is it that the cans are so strained in the first bathing?*"

Ans. "*The larger amount of pressure is occasioned by the amount of gas or atmospheric air the goods contained.*"

WHITTIER on the part of Complainants—.

Trans. of Rec., p. 150, *Ans.* 4.

"*I knew of Isaac's packing green corn at Westbrook. He had invented a process of preserving green corn and was intending to apply for a Patent on it, and it was, of course, desirable that the cans or vessels to contain the preserved corn, should be strong and well made. I think the cans were for the most part made at his brother Nathan's store—a stove store—or by one of Nathan's workmen. I think the cans were as well made as any one* THEN *knew how; but many of them burst.*"

JOHN W. JONES, *Trans. of Rec., p.* 154, *Int.* 5.

"*Please state the condition of the art of making cans from* 1842 *or* 1843 *to* 1853."

Ans. "*They were very imperfectly made indeed. Can making was but very little known at that time. Isaac Winslow employed a common tinworker, who worked in Nathan Winslow's stove store, to make his. Many of the cans leaked, and were weak and imperfect; would often burst during the process of packing.*"

SAMUEL RUMERY, *Trans. of Rec., p.* 157, *Int.* 12.

Int. "*Please state the reason that the small puncture was sometimes left open in* 1849 *or* '50, *as you have stated, when the cans were bathed.*"

Ans. "*Winslow had some cans which were very poorly made; the seams were not strong enough to stand much pressure, and in order to use those cans, we were obliged to boil them with the hole open, to prevent them from bursting. There was no correct system of making cans at that time.*"

This is all the testimony upon this subject in the case.

This is not only without contradiction, but is supported in part by the testimony of U. S. Treat, one of the most important of Respondents' witnesses.

I therefore take as proved that the art of making tin cans of sufficient strength to resist the strain produced by the evolution of steam, gases, &c., in the preparation of hermetically sealed green corn, was not known until as late as 1851 or 1852.

It may be remarked when the cans happened to be strong enough to resist and endure the strain, Winslow's corn was always found to be good.

J. W. Jones, *Trans. of Rec., p.* 35, *Ans. to Int.* 5—

Ans. "*I very often opened it and examined it, and the corn had kept very nice indeed.*"

Same witness, *Trans. of Rec., p.* 154, *Ans.* 5.

"*I have lately seen cans used by Issac Winslow's early packing, when the cans were perfectly good. I have opened them and found the corn sweet and good, which had been lying in one of Nathan Winslow's lofts for many years.*"

There is another consideration which applies to this branch of the case.

The object of the inventor was to pack green corn so that it would keep through a succession of years. He was, therefore, obliged to wait in order to ascertain if his process was successful in this particular.

This would require at least a year or two's storage of the packed corn in order that it might be submitted to the different temperatures of the different seasons. To preserve and keep the corn was indeed the ultimate object of all the inventor's efforts.

Now when it is taken into consideration that on each year from 1842 to 1850 or 1851, the inventor made his annual experiments; that he was limited to a few days in each year for the making of them; that his cans were very imperfect; that he was compelled to wait and see if his corn would keep in a sound state, and that he steadily refused to have any traffic made in his corn, it is insisted that the lapse of time from 1842 to 1853 is not only no evidence of abandonment on the part of the inventor, but is shown to be only a necessary period in which to perfect and establish his invention.

It is not shown on the Record in the testimony that the public had become acquainted with this article during these

years. On the contrary it is shown by the Respondents' testimony, as well as by that of Complainants', that as late as 1848 or 1849 this article was wholly unknown in the market. And it should be in this connection remembered that whatever had been done toward the practical preservation of green corn before Isaac Winslow's application for Letters Patent, started from information in some way derived from him.

SECOND.

AS TO THE ACTS OF THE INVENTOR FROM THE DATE OF HIS APPLICATION FOR A PATENT TO THE DATE OF THE ISSUE THEREOF.

Application was first made by the inventor for one Patent upon the several subject matters of the two Patents in issue.

It does not appear that the subject matter of the first Patent, to wit: the product, was ever rejected. The process only was rejected.

See official letter of date November 9, 1853, *Trans. of Rec.*, *p.* 81.

On November 2d, 1853, the applicant was ordered to divide his application, separating the operation of cutting the corn from the cob, from the subsequent steps in the treatment of the kernels.

Trans. of Rec., *p.* 80.

On August 2d, 1854, the specifications and drawings were returned to the applicant.

No further entries appear upon the file wrapper of the application.

Daniel Breed was then an examiner in the Patent Office.

He gives an account of the rejection of this application in the following language:

Trans. of Rec., p. 86, *Ans.* 3.

"*I do remember the application of Isaac Winslow. It was first examined by myself, and the case was ordered to be divided before being examined on its merits. Upon the examination of the case upon its merits, it was my view that it should be Patented, but my superior directed me to reject it upon the best references that I could find. There was an officer in the same department, by name Tissowski; he informed me that the country women in Poland tied a bladder over the mouth of a bottle and then pricked it to let out the steam, and this was embodied in the letter of reference, with Mackenzie's book of Receipts.*"

Thus there was only a primary rejection of the case, and for the reasons which appear in the foregoing answer, which it is submitted are hardly sufficient.

Prof. B. S. Hedrick says—

Trans. of Rec., p. 89.

"* * *The case had been but once rejected before I came into the office. The inventor had been ordered to divide his case by a previous order of the Patent Office. The order to divide was before the rejection, and I took it up in the condition in which it was under the order to divide. The case was examined and allowed by me, and in this condition it was placed under the order of the Patent Office before mentioned.*"

Subsequent to this time and down to the date of the issue of his Patent, the applicant was frequently at the Patent Office in pursuit of his Patent.

Trans. of Rec., p. 53, *Int.* 4.

"*Whether or not you ever saw Isaac Winslow in and about the*

Patent Office between '53 and '60, and what was his errand there?"

Ans. *"I saw Mr. Winslow at the Patent Office several times during that period. He was in pursuit of his Patent."*

Hedrick says, *Trans. of Rec., p.* 54, *Ans.* 4—

"I saw John Winslow Jones and am pretty certain that Isaac Winslow was there a short time before, about the case; because I think he left direction where he was to be found."

After the primary rejection the inventor had done all the law required to obtain a second examination of his case, but had not obtained it.

Hedrick, the examiner, *Trans. of Rec., p.* 55, *Ans.* 3, says—

"A second action had been called for by the renewed oath, but had not been given."

And in the next answer, he says as follows:

"Applicant had to do something to show that he desired a further action and was not satisfied with the references. Prior to the law requiring the renewal of the oath, the rule was for him to recall the papers and renew the oath of invention. This had been done in this case."

Thus it appears that while between 1853 and 1862, the inventor was several times in Washington in pursuit of his Patent, and although he had renewed his oath, which under the then existing law called for a second action, no action had been taken in the Patent Office at all until the Examiner, Mr. Hedrick, had taken up the case.

For this, surely, a delay in the Patent Office, the inventor was not responsible.

Professor Hedrick says he took up the case in the condition it was after the order to divide was made.

Trans. of Rec., p. 89, *before quoted.*

Thus the form in which the Patents issued was owing to the order of the Patent Office. This order was complied with, was satisfactory to the Commissioner, and he in his discretion allowed the Patents.

Every application is entitled to two rejections, and this case never passed to a final rejection, but at the second action was allowed.

Prof. Hedrick says that the case was issued by him in the condition in which it was after the order to divide, before referred to, was made.

"*The case was examined and allowed by me, and in this condition it was placed under the order of the Patent Office, before mentioned.*"

Trans. of Rec., p. 54, *Int.* 3.

Thus it appears by uncontroverted testimony that the inventor first made a single application; that he was then required to divide his case; that the case was then divided into four separate specifications, and under that form issued.

On *pp.* 80 and 81 of the *Record*, appears some of the correspondence relating to the application. And at the bottom of the 80th page is an official communication showing that the specifications were returned to the inventor.

Formerly that was the practice of the Patent Office when amendments were required,

The fact that many were lost in the transmission was probably the occasion of the rule now in force, which prohibits an

original specification once entered in the Patent Office from being withdrawn therefrom.

The letter at the top of *p.* 81, shows that considerable confusion existed as to the correct address of the applicant.

This is sufficient perhaps, to account for the loss of the original specification.

Whether it does or not, it is shown that the inventor reproduced his specifications, accompanied them with a renewed oath, as the law then required, and that the Commissioner admitted those specifications as correctly descriptive of the inventions referred to in the original application, which *original application* was never lost, but remains on file to this day, and may be found at the bottom of *p.* 79 of the *Transcript.*

Every specification of invention rests upon the oath of the applicant as did the divided specifications of this inventor after he had received the order from the Patent Office.

Nothing can be clearer upon all of this evidence than that the inventor was first improperly rejected; that after being called upon to divide his application he pursued his petition in the Patent Office from year to year, (never receiving a final rejection) until at last the case came into the hands of so scientific and skilful an expert as Prof. Hedrick, by whom it was allowed and ordered to issue.

Reference to the official note on *p.* 81 of the *Transcript*, and dated Nov. 19, 1853, when read in connection with the 3d answer on *p.* 53, will show that this application did not receive any very scientific consideration until Prof. Hedrick took it up.

It may be remarked that there are no facts in evidence shown tending to prove *laches* or neglect on the part of the inventor from the date of his invention to the date of his application, or from the date of his application to that of the issue of the Patents; but it would seem that the mere lapse of time is the ele-

ment of proof relied upon to establish forfeiture or abandonment on the part of the inventor.

It is submitted that Isaac Winslow neither did anything, or omitted to do anything by which his right to a Patent was lost, either between the date of his invention to the date of his application, or from the date of his application to that of the issue of his Patents, which periods of time are as follows:

Date of Invention,	- - - - -	1842.
" " Application,	- - -	March, 1853.
" " Issue,	- - - - -	1862.

In closing the remarks upon the third and forth defences set up in the answer, it is important to observe that Isaac Winslow resided in Philadelphia.

His brother Nathan resided in Portland, Maine.

Isaac Winslow was only in Portland, where his brother lived, for a few days of each year; say from four to ten, and this was not during the *selling* season, but during the *packing* season.

Isaac Winslow was poor, and his brother Nathan was well off.

Some sales of corn undoubtedly took place by Nathan Winslow between 1842 and 1853.

But it is most clearly shown by undisputed proof that the inventor was opposed to such sales.

Nathan Winslow may have felt at liberty, notwithstanding his brother's protest (since he was furnishing the money by which his brother was enabled to conduct his experiments) to dispose of some corn, and perhaps to pack and dispose of some on his own account.

But the inventor should not surely be held responsible for the misfortune of the poverty of his condition, or for the acts

which his brother Nathan did, and could do, in consequence of the obligations under which the inventor was lying to him for the furnishing him of supplies of money, which enabled him to prosecute his experiments.

Furthermore, the fact that Isaac lived in Philadelphia and was only in Portland for a few days in each year, not only shows that the Respondent has failed to make out a case of Isaac's knowledge of his brother Nathan's sale of corn, but is pretty strong proof to show that he did not and could not know anything about it.

Some emphasis is put upon the fact that Isaac and Nathan were brothers, and that Isaac therefore should be held responsible for Nathan's acts in this behalf. But in view of the facts that the inventor was poor, that his brother paid his bills, and that the inventor was away from Portland during all the time when Nathan is proved to have sold the corn, and that no proof is exhibited of Isaac's knowledge of Nathan's sales, it seems to be hardly a liberal dealing with Isaac's acts to hold him responsible for certain sales of which it is pretty certain he knew nothing.

Isaac must have been in Portland each year about August or September.

On page 128 is shown a bill of a sale of corn by Nathan Winslow to Samel S. Pierce. The date of this bill is February 19, 1848. This is a time of the year when the inventor was at home in Philadelphia.

No business connection existed between Nathan and Isaac Winslow in packing corn.

See page 65 *of this Brief, under* "*Trans of Rec., p.* 152, *Ans.* 2."

AS TO INFRINGEMENT.

Upon this point the Court in its opinion, says as follows:—

"*Much consideration need not be given to the question of infringement, as the Respondent admits that his foreman, though as he alleges, without his consent, put up certain parcels of green corn, preserved substantially by the same process as that described in the specification of the Patentee, and substantially the same as covered by his Patents, amounting to seven hundred cans, which have been sold and the proceeds and profits have been received by the Respondent, as stated in the account annexed to the answer.*"

Trans. of Rec., p. 163.

This admission is also made on the 14th page of the *Record*, near the top, in the answer of the Respondent.

On page 15 of the *Record*, at the bottom, is found the following schedule:

"ACCOUNT,

Canning corn in account with H. Clark.

1867, *Sept.* *By amount of profit on canning* 700 *cans under the Jones Patent, including all expenses of canning the same,* - - - - - $32.18"

No denial of infringement is made in the case, and it was not discussed at the hearing in the Circuit Court, but admitted.

Furthermore, infringements is directly charged in the Bill of Complaint, and is not denied in the answer; therefore without the admission above shown, the case comes within the rule that where an allegation is well pleaded in a Bill and not denied in the answer, the truth of the allegation must be taken to be admitted.

Again, the Respondent does not deny that when he received the profit of the seven hundred cans, that he then knew the process by which the corn had been preserved.

The canning by this process was the act of his foreman and agent, and the case does not show that the agent had any instructions as to the process he should pursue, but was apparently left to put up corn in any method he saw fit.

Whether more than the amount named in the account annexed to the Bill was actually packed under the Winslow process by the Respondent, these Complainants have not been able to ascertain; but the question of the mere extent of the infringement is not, of course, material, when *an* infringement is once admitted or proved.

There has been and it is submitted there can be no question as to the infringement of the Winslow process by the Respondent.

General Observations.

The indispensable step to the preservation of green corn, and to having it in a green and tender state when preserved, is the cutting of the kernels in a green state from the cob, so that the juices of the corn may flow out from the cells of the kernels, and thus essentially change the natural position of the elements of the corn.

By this step, the corn is thereafterwards prevented from becoming ripe or tough, or approaching any nearer toward a state of ripeness.

In order that the juices may thus flow out when the kernels are cut from the cob, the kernels must be so cut when they are in the milky state, and raw.

In order fully to understand the true character of this invention, it is to be observed that the invention does not consist in putting kernels of corn, in their own juices, raw into cans, but

it does consist in such a treatment of the kernels before they are placed in the cans, that when heat is applied to them to prevent subsequent fermentation, the corn is not thereby rendered any more woody or tough than it was when in the raw state cut from the cob.

Cutting of the kernels from the cob when not viewed in connection with the results *upon the preservation of green corn*, which resulted from said cutting might be considered an insignificant act which could hardly amount to invention.

But like the use of a wheel or a lever in a machine which often works the most important results, this severing of the kernels from the cob, and thereby altering the position of all the elements of the kernel, has produced this result; that preserved green corn has now become a most important and valuable article of trade in this country and of exportation to foreign countries.

It is enough to say that Isaac Winslow's invention was followed in the course of years by an immense production of the article of green corn in this country, and that before the date of it nothing of it was known.

This invention was founded upon a correct observation of a certain law of nature relating to the method of preserving corn in a green state. It was necessary to the inventor that he should prescribe the cutting of the kernels from the cob so as to permit of the outflow of the juices of the kernels, in order to arrest the progress toward maturity, so that when heat was applied for the purpose of coagulating the juices of the kernels, and of destroying the germs of fermentation and decomposition, this heat should not have the effect of producing a kind of artificial ripening of the corn, but should have only the effect to ward off fermentation.

This the inventor accomplished by removing the juices of the

corn from their natural repositories, to wit: the cells of the kernels, and placing those juices in such position that they were thereafterwards not subject to the law of progress toward *ripening*, but only subject to the tendency toward decomposition.

Having once placed the constituents of the kernels in a condition where heat would no longer tend to ripen the kernels and make them tough and stringy, he then applies heat to coagulate the juices of the kernels, expel from them the oxygen of the air, which is the active agent of fermentation, and destroy the spores which are the germs of fermentation,

Now, in order to preserve the corn in its tender and juicy condition, it was necessary to change it from its natural state. It could not be preserved and kept soft and tender, if the kernels were put into the cans *whole*, or in other words, in their natural state.

In this condition heat of any kind would either ripen, or shrink, wither, dry, and harden them.

The kernels were, therefore, cut from the cob.

It was a small thing, but it accomplished the result.

No green corn is to-day, or can be preserved in this country, unless this step is pursued.

The mere cooking of the corn in the cans, was not Isaac Winslow's invention.

Appert had discovered that in France in 1809, and Durand had patented that in England in 1810, and I will admit, although it is not shown on the *Record* that an American whose specifications are now lost, had obtained a Patent in this country upon the Appert process between 1830 and 1840; but the preservation of green corn never resulted from the publication of the Appert process in this country, or in England or France,

The *Record* shows that every man who preserved green corn

in this country (and the dates are all subsequent to the date of Isaac Winslow's invention) employed the method prescribed by Isaac Winslow, of first cutting the kernels of corn from the cob.

These Patents are originals. They are not reissues. They exhibit all the imperfections of phase and structure which characterize specifications drawn by inartificial agents. The production of reissued specifications of Patents has now become by no means a contemptible branch of legal business.

When these specifications were drawn, the making papers of this kind had not become an art as it now is.

These representations, therefore, of the inventor, are to be taken and looked at as the expression of his ideas at a time in the history of our Patent law, when there were not skilled persons to embody his thoughts in the best language and that which was best suited to convey his discovery to other minds, as there are now.

The fact that the third and fourth Patents comprise nothing but what is embraced in the first and the second, illustrates this statement clearly.

This proves that the inventor may be liable to suffer from the imperfections in the draft of his specifications.

Some observations upon the Depositions of S. Dana Hayes, Complainants' Expert, and Stephen P. Sharples, Expert Witness for Respondent.

It may be remarked in the beginning, that there is no substantial dispute between these two depositions, except upon the point of the proportion of water existing in green corn as shown by the two analyses of these two experts; but whether green corn contains more or less of water, is not a matter at all im-

portant in this case, or one upon which anything important in the case is dependent.

It is admitted upon both sides that when the kernels of corn are severed, the juices of the kernels will exude, and as long as this is the case, the primary step prescribed by Isaac Winslow, will effect the result whether the kernels contain a greater or less proportion of water.

The necessity of cutting the kernels from the cob in order to the preservation of corn in a green or tender state, is not denied.

Prof. Hayes, in speaking of the Winslow process, says as follows:

"*Kernels of green sweet corn in their milky state, are composed of the constituents named, and in the proportions given at the end of this answer. Green sweet corn is a peculiar substance, differing materially from any other cereal, seed, fruit or vegetable used as food. Its composition and structure are such that it is singularly susceptible to fermentative decompositions and changes, more so than any fruit or vegetable that has been successfully preserved in hermetically closed packages, for any considerable length of time. Its liability to rapid change is not due to any one particular constituent, but to the presence of such substances as gluten, sugar, fat and starch,* TOGETHER, *and in proportions best adapted for fermentation and action upon each other. Its peculiar flavor, other than its sweetness, is contained in and associated with the fat or oil present, and very slight fermentations of the other constituents are sufficient to destroy it. Kernels of sweet corn, as compared with sweet peas, for instance, are much more delicate and liable to change; they contain a much larger proportion of milk, juice or sap, which itself contains more sugar, starch and fat than the juice of sweet peas; and the glutenous or nitrogenous constituent, which acts as the ferment, or primary cause of change,*

is much more active in the juice of sweet corn than in that of sweet peas. As compared with fruits like peaches, for instance, kernels of sweet corn contain only one-eighth part as much water, and the peaches contain no fat oil, besides other equally important differences; and fruits are much less liable to ferment that sweet corn; they are more easily packed and preserved. Sweet corn, in common with other cereals, contains more phosphorous or phosphoric acid than fruits and other vegetables."

Trans. of Rec., p. 60, *Ans.* 7.

And again—

"*Kernels of raw green corn contain atmospheric air, and carbonic acid gas within their cells, and in the interstices, when packed in cans preparatory to sealing up. The presence of air is a necessary condition to fermentation, and if it was allowed to remain distributed throughout the mass of corn, it would support fermentation and decomposition, caused by the gluten and nitrogenous matters present. Without air, fermentation would not take place; but in all corn that has been picked from the stock for any length of time, incipient decomposition has set in, and the active germs of fermentation are present.*"

Trans. of Rec., p. 62, *Ans.* 11.

As has been before remarked, the kernels are cut from the cob so as to liberate the juices thereof, to permit of their outflow, and thus arrest the tendency toward the increase of the woody fibre of the kernels, or a sort of artificial ripening. The juices which have exuded from the kernels, surround the kernels. The mass is cooked in order to arrest fermentation.

After the bathing has proceeded to a certain degree, the cans are vented, *i. e.* a small pin-hole is made in the tops to let off the steam and gases which have been generated by the cooking.

Prof. Hayes says—

"*By this expanding the air the supporters of decomposition are rarefied, and rise to the top of the can. Moreover, by heat the germs of fermentation are destroyed in the air within the can. When resealed the can is then subjected to the second bathing or boiling.*"

That the cutting of the kernels from the cob, and the outflow of the juices is absolutely necessary for the preservation of corn in a green and tender state, Sharples, the defendants' expert, does not deny.

That this step prevents the corn from becoming tough while being preserved, he does not deny.

Thus the absolute importance of the principal step described in the Winslow Patents, and that which constitutes the chief novelty of the invention, may be taken to be admitted.

The deposition of Sharples may be found on the *Transcript, page* 142, and a perusal of the same will show that the above statement is correct.

In his answer to the third cross-interrogatory, he states as follows:

"* * * *The process of maturing consists partially in the elimination of water, together with the change of the sugar and dextrine or gum, into starch. The relative proportions of the remaining solid parts of the corn apparently undergoes but little change.*"

Trans. of Rec., p. 145.

He seems to have been introduced principally for the purpose of showing that the analysis of Prof. Hayes was incorrect, in the particular of the proportion of water which resides in sweet corn.

It is perfectly plain from the above quoted statement of Mr.

Sharples, that the amount of water in so-called "green corn" is dependent upon too many conditions to enable one to institute a comparison between the correctness of two analysis, unless accompanying them was a statement of all those conditions, so that determination could be made as to whether they agreed in the subjects of the two analyses.

Green corn has a wide signification, and means only that the corn is not ripe, or concrete; but as Sharples says, changes in the stages of its maturity effect the amount of water which it would disclose.

The circumstances which would affect the amount of water contained in a kernel of corn, are as follows:

1. Its degree of maturity, or immaturity.
2. The time it had been picked or separated from its stock.
3. The amount of saccharine matter it contained, that is, whether it was simply green corn, or whether it was what is known *green sweet* corn.

Corn might be taken and analized at such an immature stage of growth, as that it would contain hardly anything within its rind but water, and would be to the taste in that condition insipid and almost tasteless; or it might be taken just before it became hard, and when the process of the elimination of the water had been almost completed, and even then both specimens would be green corn, because neither of the specimens had become ripe corn.

This is merely intended to show that so much is dependent upon conditions which are not stated in the two depositions where these two conflicting analysis are found, that little is to be said in favor of one or against the other, until all the circumstances of the analysis are known.

But the whole subject is of little importance in this case.

If Mr. Sharples was introduced to weaken the liability of Prof. Hayes' deposition as to the correctness of his analysis relative to the amount of water within the corn, the Complainants do not care to quarrel with him upon this point inasmuch as he tacitly admits everything else that Prof. Hayes says relating to *Isaac Winslow's process*, the propriety and necessity of it, for the preservation of this cereal.

If it should be granted, which it is not, that Sharples' analysis is more nearly correct than Hayes', as to water, then the confidence in Hayes' analysis would be diminished; but this would have no effect upon the other parts of Hayes' deposition relating closely to this case, and concerning the Winslow process, in which particulars Sharples does not attempt to differ from Hayes.

Now what did Sharples tacitly admit in giving his deposition in opposition to that of Hayes?

1. "*The whole success in preserving sweet corn depends upon this cutting open or breaking of the kernels before they are put into the cans for cooking.*"

Trans. of Rec., Ans. 10, *p.* 61.

2. "*It would be impossible to cook green corn in the raw or crude state by following the directions of Durand's Patent.*"

Same Ans., Trans. of Rec., p. 61.

3. "*Durand's process in my opinion was not intended to apply to green sweet corn; I form this judgment partly from its date,* AND FROM THE WANT OF DETAIL, *and from proper description in the specification.*"

Cross-Ans. 7, *Trans of Rec., p.* 63.

The above quotations are statements of Prof. Hayes, and are not attempted to be disputed by Mr. Sharples.

Inasmuch as these statements remain uncontradicted, and are of the greatest importance to the Complainants' case, the question of the correct analysis which is of no importance, may well be passed without further remark.

The attempt of the Defendants' expert to attack the statements of Prof. Hayes in any particular, may perhaps be as well appreciated by ascertaining what the extent of his experience as an analytical chemist has been, as well as by any other means.

In the answer to Cross-Int. 7, the following testimony appears:

"*Have you ever made any analysis of green corn before the one upon which you have testified?*"

Ans. "*I have not.*"

Trans. of Rec., p. 145.

"*When was the first time you ever undertook the analysis of the constituents of any vegetable?*"

Ans. "*We distinguish two kinds of analysis, proximate and ultimate. I first made ultimate analysis as given above. I have made proximate analysis, for the separation of one single constituent of vegetable organic bodies, at various times. My first full investigation of the constitueuts of an organic body was made this last summer. It is not the one upon which I am now testifying.*"

Trans. of Rec., p. 146.

The following explanation of this expert as to the chemical effect of confined air on the juices of green corn, may be further

cited as a proof of his capacity to contradict in any particular the testimony of Prof. Hayes:

"*What is the chemical effect of confined air on the essential oils, juices and flavor of green corn, when exposed to heat in air tight vessels, and how is that effect produced?*"

Ans. "*The flavor of any vegetable is owing to certain essential oils. These oils tend to oxidize, more or less rapidly, when the vegetables are exposed to the air. By heating vegetables in contact with confined air, this action would be accelerated, according to well known chemical principles. By this oxidation the flavor is destroyed or deteriorated, and the vegetable becomes stale.*"

"*State whether or not the essential flavor or juices of green corn, when packed in cans with vented tops, and put into hot baths for a short time, is dissipated or driven off; and if not, why?*"

Ans. "*It would undoubtedly be, to some extent; how much would depend upon the length of time it was heated. Heating quickly would prevent, to some extent, this loss, by coagulating the juices of the corn.*"

Trans. of Rec., p. 144.

That is to say, in Ans. 7, he says that the essential oils of green corn tend to oxidize when exposed to air, and by heating vegetables in contact with *confined air*, this action would be accelerated and the flavor destroyed.

In the very next answer, he says that leaving open the puncture would tend to allow the flavor to escape; *but heating would tend to prevent loss of flavor* by the coagulation it occasioned.

Now which of these answers is correct and true? If heating causes coagulation, and coagulation prevents the loss of native flavor, how can heating destroy flavor?

He says heating accelerates "oxidation," and oxidation "destroys" flavor, and in the next breath he says that heating "prevents" loss of flavor, by causing coagulation.

This, it must be confessed, is not quite clear.

These citations are only made in order to show that if Prof. Hayes' analysis was incorrect in the particular that the corn which he analized was not very green, his analysis of the corn which he did have should not be deemed absolutely incorrect upon the testimony of a person who cannot discourse with more intelligence and clearness than Mr. Sharples can concerning the effects of heat on "oxidation" and "coagulation" of the elements of green corn.

Prof. Hayes may have gone astray upon an immaterial point in this case; Mr. Sharples has surely become confused in his statements upon the very material one.

Some testimony was introduced into the case to show that green corn could be preserved in cans in the tops of which, while the heating and cooking process was going on, a small pin-hole or puncture was made in order to allow the escape of the steam and gases as they were generated by the application of the heat.

There is no doubt that this can be done.

When this method is pursued the cans cannot be wholly immersed, because the water from the bath, in case of immersion, would prevent the escape of the steam, &c., and might enter the puncture. If the can is bathed with the pin-hole in the top of it, then you can only put into the bath at one time, a single tier of cans, with their upper ends out of and projecting above the surface of the water.

In the particular method described in the Winslow Patents this pin-hole or puncture to allow of the escape of the steam and gases produced by the application of heat to the cans, is made after a preliminary heating of some few moments.

In the method referred to in the Sharples deposition, the

puncture is allowed to remain open while the preliminary heating process is going on.

But there is no difference in the product, and no effect upon it, whether the puncture is made a few moments earlier or later.

Burnham, witness for the Respondent, says that with this minute puncture, and keeping the can in the bath but one-half hour, he "*loses none of, or a very minute portion of the flavor.*"
Trans. of Rec., p. 142.

He also says that it would take just about the one-half hour for the contents of the can to reach the boiling point, and he also admits that when the can is punctured at this time, you cannot work as fast as you could if the cans were not punctured. And he also admits that the can is sealed at the close of one-half hour.
Trans. of Rec., pp. 141-142.

One of the purposes of the Winslow Patents, was, of course, to preserve the original flavor and aroma of green corn; and if by puncturing the top of the can a few moments earlier than the time which Winslow specifies in his Patents, has no effect to destroy the flavor and aroma, then it is manifest that the two times of making this pin-hole, do not have the effect to constitute different processes.

Burnham says that the minute puncture is closed as soon as the steam begins to issue therefrom. That is to say, the moment there is any liability of the escape of the aroma of the corn, that moment the puncture is stopped up. So that there is no opportunity for the juices of the corn to exhale; because the can is immediately sealed or soldered when the heat takes effect to produce the exhalation, and thereafterwards the cooking is conducted in the sealed cans exactly as in the Winslow process. In other words, the instant this puncture might possibly have

the effect to produce any change from the effect of the Winslow process, that moment the puncture is closed.

The first answer to this piece of testimony is that it is not even pretended that anybody ever packed corn in this country by such method, until years after the date of Isaac Winslow's discovery.

The second answer is that it is the same process as the one Isaac Winslow discovered, because it embodies the cutting of the kernels from the cob to admit of the outflow of the juices of the kernels, and to arrest the progress toward ripening, and because, leaving the pin-hole open for a few moments, has no effect either to change any of the steps of the process, or the character of the article produced.

It seems that before a can is filled with the green corn, a portion of the cover is already sealed on, leaving only a hole about an inch or so in diameter, which, when the can is filled, is closed by a circular piece of metal called a stud.

When the can is filled and the stud is being soldered on, there is always left open in the stud during the soldering process, this small pin-hole or puncture, in order to let out the air in the can, which is expanded by the application to the top of the can of the hot soldering iron. Otherwise the air would bubble up through the molten solder and prevent tight work.

Baxter says that he has made experiments upon the method described by Burnham and that it is one and the same process, and that it makes no difference.

Trans. of Rec., *p.* 167, *Ans.* 6.

See also same deposition, *p.* 161, *Cross-Ans.* 4.

It is difficult to see the pertinancy of this piece of testimony of Burnham's, unless it serves to show that the severing of the kernels preparatory to placing them in the cans, is indispensable to the preservation of green corn. It may have been introduced

in view of the Durand Patent hereinbefore referred to, and in view of the fact that Durand specifies that the heads of his cans may be left open. This may possibly, therefore, be introduced to show that corn could be cooked, following the directions of the Durand Patent after the kernels had once been broken open and placed in the cans.

Such proposition I do not deny.

It will be remembered that the answer which is made to the Durand Patent is, that it contains no specific directions for the preparation of the kernels before they are placed in the cans, and getting them into such condition that they may by preserved without losing their tenderness, their juicy and full flavored condition.

Isaac Winslow provided in his specifications for an expeditious manner of treating a large number of cans, and was evidently looking to the preparation of larger quantities of this article for the market; and so he provided for closing the puncture in the cans, when they were filled, in order that large boilers could be filled with cans from the top to bottom, for the purposes of boiling.

It will be almost absurd to say that after Isaac Winslow had discovered the method of treating the kernels of the corn, so that they could be preserved in the tender and juicy state without becoming tough, that a subsequent man *following Isaac Winslow's directions as to the preparatory treatment*, could escape the charge of infringement by showing that he warmed or partially heated his corn in an open topped can, or a punctured topped can, or even in an *open topped boiler, without any cans at all, at that stage, and put the corn into the cans afterwards.*

This would seem an especially slimsy defence when we remember that Durand in 1810, had specified that the containing vessels could be left open at the top if desired.

If this testimony is introduced with this view, and in view of the words in Complainants' Patents to the effect that the cans should be immediately sealed when the corn is put into them, *then* it is no defence at all. Because—

1. The Respondent does not pretend to have packed in any such manner.

2. It is an immaterial change in that part of the Winslow process, or in one of the steps of the Winslow process, which is not claimed by itself to be new.

Upon the question of the validity, or the infringement of these Patents, the fact whether a person has preserved or can preserve green corn by a sort of preliminary heating in an open vessel, or a partially opened one, has no pertenancy whatever, so long as it is conceded that the *new preparatory, and indispensable step prescribed by these Patents is followed.*

In this connection attention is called to the testimony of Jas. P. Baxter, *p.* 157, *Int.* 5 *and* 6, and *p*, 158, *Int.* 9 *of the Transcript.*

Value of this Discovery.

It is a noticeable fact, on this testimony,—

1. That at or about the time of Isaac Winslow's invention, to wit, about 1842, there is no proof of the existence of any such merchantable article as preserved green corn, by whatever process preserved.

2. That within a few years previous to the filing of Isaac Winslow's application for a Patent, preserved green corn began to be sold in the market, preserved by different processes.

3. That immediately after the filing of Isaac Winslow's ap-

plication, to wit, March 8, 1853, an extensive commerce in this article immediately began, and has steadily gone on increasing, until it now amounts to many million of cans per annum.

To what is this great fact attributable? Can it be ascribed to anything but the invention of Isaac Winslow, made in 1841 or '42, prevented from publication for a few succeeding years by the fact that no suitable and safe vessels could be furnished by the can-maker for the practice of his discovery, and at last published to the world by his application for a Patent in 1853?

Observe what an enormous increase took place in the preservation of green corn, about, and soon after the date of the filing of Isaac Winslow's application.

LAW.

THE MAGNITUDE OF THE INVENTION.

It is undoubtedly proved that the cause of the success of Isaac Winslow's process, and of the extensive growth of this branch of business, following the publication of his Letters Patent, is the preparatory treatment of the kernels, which his Patents describe as necessarily preliminary to the destruction of the germs of fermentation in the cereal by heat, which latter step is not and cannot be claimed as new with the inventor.

This preliminary step, as has been often said, is the severing of the kernels and their separation from the ear.

It is not, of course, asserted that a man may have a Patent for cutting kernels of corn from the cob by itself and not connected with any particular process, or object to be obtained, any more than he could have one for an ordinary wheel or gear unassociated with any particular machine.

But a man may have a valid Patent for a wheel of novel construction by itself as a new wheel, or upon a wheel of common construction associated with a new machine, or when performing a new and useful function in an old machine.

The introduction of the wheel into a machine may be the simplest thing in the world, but it may accomplish great and important results.

So the severing of the kernels of green corn from the cob, a

very common act, may become, in view of all its consequences, and its effects upon the preservation of this article of food, a most important and valuable discovery.

But it is well settled that the right to a Patent does not depend upon the quantity of thought, ingenuity, skill, or labor which *after the fact of the discovery*, appear to be necessary for the making of the invention described in the specification attached to the Patent.

Curt on Pat., Sec. 31.

The invention may not consist, and can hardly ever consist, in some mere, simple, familiar act; but it is the act accompanied by its consequences, and in its connection with, and influence upon, a result desired to be obtained.

To cut the kernels of corn from the cob would seem to be simple.

But so to sever them with the view that their juices shall exude, and that the natural processes within the kernels shall be arrested by a change thus created in the chemical relations of the constituents of the kernels, with a view to the preservation of the corn, at that exact stage and condition for years afterwards, would seem to be the result of a very nice, observant, and discriminating mind, enlightened by careful and intelligent experiment.

DOES THE PATENT TO PETER DURAND DESCRIBE IN ITS SPECIFICATIONS THE INVENTION OF ISAAC WINSLOW?

Patented inventions in this country are not held to be anticipated by a foreign publication, unless such publication contain a description of the alleged domestic invention in such full,

clear, and exact terms as would amount to a specification, and so as to enable any one skilled in the art to which the publication relates, to practice the alleged invention without further information.

Seymour v. Osborne, 11 *Wall*, 555.

The Durand Patent was enrolled in 1810. No green corn was ever packed by anybody in this country until 1842, and then by Isaac Winslow.

The first real business that was ever attempted in this country in this article, was begun by J. W. Jones and Nathan Winslow, two relatives of the inventor, who derived their knowledge from him, and who never began until about 1853, when the inventor had filed the specifications of his invention in the Patent Office.

The specifications of the Durand Patent do not contain a word as to the preparation of kernels *to keep them green*, and before they are placed in the cans.

As to the Acts of the Inventor from 1842, the Date of his Invention, to 1853, the Date of his Application.

The inventor is dead.

Explanation of this delay must therefore be derived from the testimony of those who were intimate with him.

The evidence upon this point has been heretofore discussed in this Brief.

The acts of an inventor in testing the value of his invention, or experimenting upon it, are liberally construed.

Mellus v. Silsbee, 4 *Mas.* 111.

An invention cannot have been in public use and on sale for more than two years prior to the application for Letters Patent, so as to invalidate the Patent when issued to the inventor, except such use and sale is proved to have taken place with the consent and allowance of the inventor.

Ryan v. Goodwin, 3 *Sum.* 518.

Without such consent on his part, such acts will not justify an infringement upon his Patent.

Wyeth v. Stone, 1 *Story*, 282.

After Patent issued, moreover, proof of such a defence must be clear and conclusive.

Same case.

Not only is no proof on the Record shown, of any consent of the inventor to any of the sales that were proved; but his ignorance of, and opposition to them, when such were proposed to him, is established.

Mere lapse of time between the date of the invention and the date of the application, will not work a forfeiture of the inventor's rights and privileges, as long as the public have acquired no rights during this time.

A fortiori, lapse of time cannot have this effect when the inventor is enabled to explain the reasons of the delay and show that they were good ones.

This the Complainants have done in the case, and without contradiction.

AS TO THE DELAY AND LAPSE OF TIME BETWEEN THE DATE OF THE APPLICATION FOR THE PATENTS, MARCH, 1853, AND THE DATE OF THE ISSUE THEREOF, MARCH, 1862.

Upon this point the Court, in delivering its opinion in the first Circuit, says as follows:

"*Delays in the Patent Office, which an inventor cannot prevent, will not impair his title to his invention, nor can any use of the invention during such delays, if without his consent and allowance, afford any evidence to support the issue that the inventor abandoned the invention to the public.*"

Howe v. Williams, 2 *Cliff.*, 262.

Stimpson v. Railroad, 4 *How.*, 402.

Goodyear v. Day, *Law's Digest*, 263.

Morris v. Huntingdon, 1 *Paine*, 348.

This, it is submitted, was a case of delay in the Patent Office which the applicant could not prevent.

The original petition or application for a Patent remained on the files of the Patent Office from 1853 to the date of the issue, 1862, and so remained at the date of the institution of this suit.

The *specifications* were lost, probably in transmission to the applicant for the purposes of amendment.

See bottom of 80*th page of Transcript, and top of* 81*st page.*

When the lost specifications were supplied, the inventor made a renewed oath or affirmation to them.

No new petition or application was ever filed.

The form of that oath or affirmation is shown by the following extract from it.

The inventor affirmed that he believed himself "to be the original and first inventor of the new article of manufacture, or pre-

served Indian Corn herein described, *and rejected November* 19, 1853, &c. * * * *And also that the original papers are lost, and the accompanying specification is substantially the same as the one originally filed in the Patent Office,*" *&c.*

Trans. of Rec., p. 78.

The rejection referred to appears on the 81st page, under date of Nov. 19, 1853, and immediately under that, appears the date of the reception of the application, to wit, March, 1853.

As has already been shown in this *Brief*, the inventor was not lacking in attention to his case, as evidenced by his visits to the Patent Office during this interval of time.

A somewhat extended reference has been made to the testimony of certain witnesses in the case for Respondents, to show that all their knowledge of the art of preserving green corn, existed at dates considerably subsequent to the date of Isaac Winslow's invention.

This reference shows that all of them used a *different process* from that patented by the inventor.

Attention has not been called to this testimony to show that any prior process existed, and that *that* process was different from the one patented by Winslow.

The evidence on the contrary, shows, that Winslow's process antedated all of these.

There was no process for the *preservation of green corn* but what was subsequent to the discovery of Winslow.

The references to the testimony of Treat, Mitchell & Co., serve to show that in certain years after Winslow made his inventions, persons *who had heard* of his experiments, were only practicing imperfect methods in their attempts to achieve what he had done before them.

They were first *directed* to the preservation of green corn, by hearing of *his* having done the thing.

They then, not knowing his exact process, began by following the Durand process; failing in this, they advanced no further till they had either been taught or heard, or learned, the Winslow process.

No one denies that green corn can be preserved in a green state, except the kernels are severed from the ear so as to put the kernels in the proper state for being preserved green.

They cut the kernels from the cob, and then having learned the necessity of that step, they treated them by a variety of methods *afterwards.*

But having once adopted this method of the *preparatory* treatment of the kernels, we do not find that it was ever abandoned by any one of the witnesses, for the Respondent.

After having found this first step they soon found that the *best* way to preserve the corn after that, was to put it into the cans and seal them up and *bath* them.

With some, it took a longer: with some, a shorter period of time, to learn this.

But with all of them it took experiments.

And with the most of the witnesses they were only abandoned experiments, suggested at the outset by hearing something of Isaac Winslow's packing.

The thing necessary to the preservation of green corn is the rupture of the kernels, so that the cellular structure of the kernels being *broken in upon*, and the contents of the cells issuing therefrom, the whole mass is capable of a treatment by heat to which it could not otherwise be subjected, without change of the tender condition of the article preserved.

This was Isaac Winslow's invention, and upon this it is submitted, his Patents are plainly based; founded upon this they are upon a new and useful invention, and no acts or omissions of

his are proved that can show his alleged right to these Patents, unfounded.

In conclusion, particular attention is called to the affidavits of John W. Jones.

Trans. of Rec., p. 38.

Also, affidavits of Samuel Rumery.

Trans. of Rec., pp. 46 *and* 49.

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